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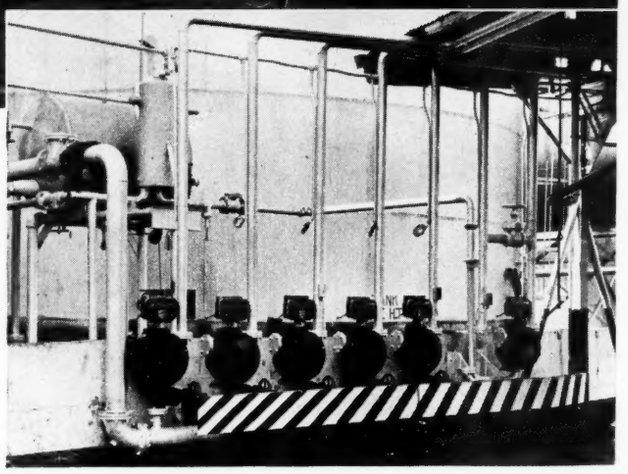
fueloil & oil heat



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VOL. 7, NO. 4

fueloil & oil heat

AUGUST 1948

Names in the News

Edwin F. Long has been named southern district sales manager for Fluid Heat Division, Anchor Post Products, Inc., Baltimore 24, Md. Mr. Long's headquarters will be located in Charlotte, N. C. He will be in charge of Fluid Heat domestic heating equipment sales and dealer activities in North and South Carolina and Georgia. Several years of successful work with Sherwood Bros., Inc., Baltimore, preceded Mr. Long's association with Fluid Heat. He is a native of Georgia and enjoys a wide acquaintance with dealers throughout his territory.

A. G. Winkler, advertising manager for FUELOIL & OIL HEAT, was confined to the hospital at Des Moines, Ia., during the latter part of July with a stomach ailment. He was on a business trip at the time he was stricken, but expects to be back at work by the middle of August.

Raymond P. Babcock has been named manager of the Hartford office of Connecticut Oil Heating Co. and Davis & Daggett Co., Hartford, Conn. Mr. Babcock is well-known and has had many years experience in the oilburning industry, most recently as New York district representative for York-Heat. During the war he was selected as project manager for the development of smoke screening machines, working with the Chemistry Dept., Columbia University. As a result of the work the weight of the machines was

CONTENTS

SUBJECT	PAGE	AUTHOR
Service Cost Studies	59	
Use Your Draft Gauge!	61	J. W. SCHULZ
Integration for Fueloil	64	ROBERT GRAY
Fueloil on the Farm	68	WALTER RUDOLPH
Methods of Heat Transfer	70	C. H. BURKHARDT
Combination Oil-Gas Burners Detrimental	72	
O.H.I. Survey of Tank Manufacturers	73	
Salesmen's Kits for Oil Prospects	74	
Hard-to-See Flames	82	
Combustion Efficiency Chart	86	

NEWS

Ample Tankers Next Season	63	
O.H.I. Hears Brighter Supply Report	67	
Petroleum Supply 12% Above 1947	76	
Burner Service School in Newark	76	
Jennings Heads Petroleum Body	76	
Extend Gas Heat Ban in New York	76	
Eliminate 3-Way Valve Requirement	77	
Texas Eastern Asks Enlarged Facilities	77	
Better Oilheating Magazine Publicity	77	
Industry Escapes Oregon Flood	78	
Magazine Asks Better Burner Adjustment	80	
Writes Book on Warm Air	80	

DEPARTMENTS

Names in the News	5
Editorial Leaks	8
Oilheating Trends	10
Fueloil Supplies	12
Service Short-Short	82
Readers' Problems	84
Industry Groups	88
New Products	96
Everyday Snags	111
Book Shelf	120
Manufacturers' Activities	120

FRONT COVER: Trailer truck used for domestic fueloil deliveries in the Chicago area by Arrow Petroleum Company, whose operation is discussed in the article beginning on page 64.

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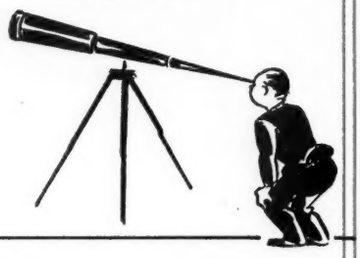
A Close-Up Look At

Automatic
REXOIL
Oil Burner
as a
Distributor
Sees It!



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Whether 100% catalytically cracked oil, 65% blend or straight run—here's HIGH efficiency even at firing rates as low as .75 g.p.h.

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Speaks for itself. Stock only what you need.

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Many exclusive patented features make sales easier because you have unchallenged talking points. Here's fuel saving you can demonstrate. No gadgets to attend to.

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Our policy comes from over 25 years' experience in knowing what it takes to keep distributors successfully and profitably in business.

But Don't Be Merely A Star Gazer

WRITE TODAY — GET FULL FACTS

Automatic
REXOIL
Oil Burner

REIF-REXOIL, Inc. **Buffalo 3, N. Y.**

MANUFACTURERS OF REXOIL CONVERSION BURNERS, BOILER UNITS, FURNACE UNITS AND DIRECT FIRED CONDITIONERS

cut from 3,000 to 300 lbs. Connecticut Oil Heating and Davis & Daggett are retail and wholesale distributors of Petro domestic and industrial oilburning equipment, York Corp. cooling equipment and Gulf fueloil.

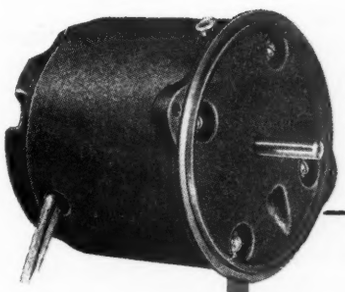
Stephen P. Cauley, who has been with the company for the past twelve years, has been made assistant manager of the fueloil division, Socony-Vacuum Oil Co., Inc., New York 4, N. Y. He began work with the company in its East Chicago, Ind., refinery in 1936 and in 1939 transferred to the technical service department in Brooklyn, N. Y. In 1945 he joined the product engineer division of the gasoline and fueloil department to execute programs on liquefied petroleum gas, distillate and residual fueloils and gas enrichment oils.

Victor W. Blackney has been appointed director of sales in the Distribution Division, United States Radiator Corp., Detroit, Mich., according to an announcement by Wesley J. Peoples, president and chairman. Mr. Blackney formerly was assistant general manager of sales. He joined United States Radiator in 1916, after graduating from Colgate University. He worked his way up through the products distribution department and served as production manager from 1931 to 1946.

John J. Boland has been promoted to chief application engineer, Meyer Furnace Co., Peoria, Ill. With the company since 1947 he now will direct the application of Weir and Meyer furnaces and air conditioning equipment in installations throughout the country. He also will be in charge of engineering sessions at company dealer schools.

Alonzo H. Magee, president, New York Air Valve Corp., New York 12, N. Y., died on June 21, at his home in Westfield, N. J. at the age of 69. For a number of years he has been engaged in the manufacture of radiator air valves and no changes are anticipated in the present operation of the company. Mr. Magee is survived by his wife and a daughter.

Ohio Motors rank first with Quincy's pioneer dealer



Which motor introduced and pioneered today's oil burner motor design? Which motor powers the largest percentage of domestic burners? Which motor wins top acclaim from home owners, dealers and burner manufacturers for extra years of trouble-free service? The letter below answers these questions and shows how you, too, can assure complete customer satisfaction *by specifying Ohio Motors — the motor that ranks first!*

QUINCY'S PIONEER SILENT GLOW OIL BURNER DEALER

CHIMINIELLO COAL & OIL CO.

121 WATER STREET -:- QUINCY 69, MASSACHUSETTS

Telephone GRAnite 1361—0137

RALPH CHIMINIELLO, Prop.

June 17, 1948

The Ohio Electric Mfg. Co.
Cleveland 4, Ohio

Gentlemen:

After installing thousands of oil burners during our more than 20 years of business, we have arrived at some pretty definite conclusions about oil burner motors.

Better than 90 per cent of the burners we installed prior to 1942 were equipped with Ohio motors. Performance has been excellent. Service calls due to motor failure have been rare.

During the war, however, we had to take over servicing of burners with other makes of motors. We experienced first hand to what extent motors can be the source of "no heat". When replacement is advisable, Ohio is our choice.

On the basis of over 20 years experience, Ohio motors rank first with us.

Very truly yours,

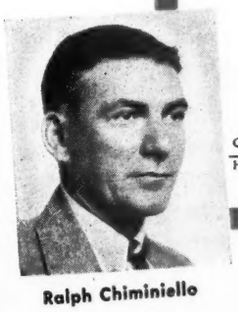
CHIMINIELLO COAL AND OIL CO.

Ralph Chiminiello

RALPH CHIMINIELLO
Manager

RC/rmc

COKE -:- COAL -:- FUEL OILS -:- -:- DOMESTIC and INDUSTR
HEATING ENGINEERING



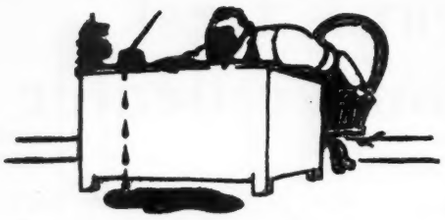
Ralph Chiminiello

1 the motor customers write about — enthusiastically

Ohio MOTORS

THE OHIO ELECTRIC MFG. CO.
5913 Maurice Ave. • Cleveland 4, Ohio

fueloil & oil heat



Editorial Leaks

The fact that stocks of distillate heating oils are currently 23% above a year ago in the areas East of the Rockies has brought considerable cheer to oilheating men too long accustomed to minus comparisons. But when economists in the big oil companies look at these stocks they are not too sure about the whole business, for the 23% rise at Mid-July is still a mite short of the par or bogey they had set for this hole on the course.

Then they take another look . . . this time at the level of dealer stocks as reported monthly by a large group to FUELOIL & OIL HEAT and the attitude changes for the better. For dealer stocks in the same areas are running 61% above a year ago. Combining terminal stocks, which are up 7 million barrels and dealer stocks, up 4 million, we have 11 million barrels improvement, or 29% across the lot. That changes the picture. Now the economists can see enough in sight to get oil into all markets, to take care of a moderate crop of new burners, and to keep out of the headlines. So they write a memo to the upper powers proclaiming these findings, load up the car and steer for some midsummer rest.

The dealers who regularly report monthly stocks in their bulk plants would get a glow of satisfaction if they could see how their information this summer is taking the edge of uncertainty off of the coming season and helping to bring about the more optimistic outlook among the economists.

It is not the function of this department to point an accusing finger at any manufacturer or group of manufacturers. It is obvious that every segment of the industry builds its products as well as the industry demands, though there is a possibility that the industry is now ready to demand and pay for a better product than most nozzle manufacturers are now offering. There is a growing feeling in the field that small-capacity nozzles are too cheap—certainly in workmanship and possibly in price.

In the days when most burners were equipped with 2-gallon nozzles, and too frequently were installed without change, a little variation in capacity, spray angle or characteristics was not serious. Fireboxes and combustion space were ample on most jobs, and operation was not critical. In these days of smaller fires, tighter boilers and furnaces, smaller combustion space and more temperamental operation generally, the minor imperfections are becoming troublesome. Too seldom will two 1-gallon nozzles give the same performance under identical conditions, and it is necessary to cut-and-try in the customer's basement until a nozzle can be found to fire the job satisfactorily. One nozzle will cause pulsations or smoke while another of identical markings will clear these conditions.

A well known oil company laboratory recently tested twenty 1.35-gallon nozzles from one manufacturer and found variations in capacity alone from 1.04 to 1.80 gallons. Spray angle, fineness and pattern also varied widely. They report the products of some manufacturers better than others, but none they found were sufficiently faithful to their markings to be satisfactory on critical jobs without re-calibrating in the laboratory.

Perhaps it is time the industry paid more money for its small nozzles in the interest of saving time and complaints. Proper finishing, polishing, rating and other testing can be most effective and economically done at the factory. Dealers can afford to pay twice or three times present prices for nozzles if they are sure that every one they get is a first-grade product that will deliver according to its markings. And it is also suggested that factory tests be made with oils of at least as low a grade and burning quality as found commercially in the field.

There seems to be no reason other than convenience and tradition why a nozzle must be stamped 1.0, 1.25 or 1.35 when it actually delivers 0.89, 1.29 or 1.38. The dealer who knows exactly what the nozzle will deliver can vary his atomizing pressure to get the exact firing rate he wants, the same as he has to do by guess today. Nozzles can be bought within a range of atomizing capacity instead of at a fixed and not-too-accurate marking. Rejects at the factory may be higher but the manufacturers would be entitled to a better price for better and more accurate nozzles.

It is not our desire to disturb the smug satisfaction of that party of stalwarts who preach that the country is running out of oil and soon will be almost devoid of that most necessary natural resource. That school, so well represented by Harold Ickes and others of his ilk, may have seen a small item inside their newspapers recently telling of work that is being done to recover oil from spent wells.

Because the work is being done by scientists at Massachusetts Institute of Technology and elsewhere there are no claims being made and no promises expressed or implied, but it is hard to miss an implication. Under high temperature and pressure they are learning to mix oil and water and this may mean that many of the spent oil fields can be made to yield again.

Water flooding of old oil wells has not been too successful in the past. Oil clings to the pores of the sandstone and repels the water. If the present work is successful, this oil may be made to combine with the water and be floated out where it can be recovered.

Under former methods of recovery only a little more than half the oil in a pool has been recovered, according to the experts. Any improvement in recovery methods would add millions, and possibly billions, of barrels of available oil to our present reserves without drilling new wells or opening new oil fields.

The search for bald truth in the business press is promoted materially by genial Gene Brown, sales manager for Morrison Steel Products, Inc., Buffalo. He sends a recent picture against that time when "I may get a furnace order or shoot my wife," with the explanation that older photographs show him with too much hair. Then there are messages insinuating that he has gone vain and adopted a toupee. Orchids for candor to Mr. Brown!

FRANK P. SCULLY

TO THE MEMBERS OF THE OIL BURNER AND FUEL OIL INDUSTRY:

Thank God for the Oil Heat Institute!

Perhaps you are a member. Perhaps you do not believe in trade associations. Possibly you have no conception of how important it is to yourself, to your business and to your future success that there be an agency which is ready and able to fight for you in these troubled days.

Just think back three months ago to the time of the Chicago show. Defeatism was general. The press was filled with dire predictions of fuel oil shortages. Consumers were so frightened that even replacement sales could not be made. The oil burner industry and its allied lines were verging on a chaotic condition—no one really knew what was to come. Some blamed the oil companies. Oil companies felt that too much effort had been placed on burner sales in the previous year. Government officials were suggesting that oil burner sales be prohibited by law. The future looked very bleak.

This is written on Thursday, July 15th. I have just had the privilege of attending, simply as an observer, the meeting of the Oil Heat Institute directors at Portsmouth, New Hampshire, on July 12th and 13th. I wish everyone in the industry could have attended.

You would have heard of the substantial progress which has been made. Order is beginning to come out of chaos. No longer is every uninformed individual or politician able to predict that we will have no oil to heat our homes—and get away with it without challenge. Watch the changed tone in newspaper comments.

The relationship between the oil burner industry and the major oil companies is changing for the better. Now a realization of the problems of both sides is emerging and a new spirit of cooperation resulting.

At the American Petroleum Institute, Marketing Conference, at Atlantic City, in May, representatives of the Oil Heat Institute presented the case for oil heating. As a result of that meeting and later conferences in Washington, very substantial progress was made toward changing the attitudes of some of the higher Government officials with consequent benefit to us all.

You have read of the New England Oil Heat Exposition and the lift and encouragement that that splendid meeting gave to the industry.

These things just don't happen by themselves. They take money and effort—but, far more, they take the energy and the time of men, leaders in the industry, whose time could not be purchased. These efforts have been given freely.

It would be impossible for me to list the names of all these individuals. They have neglected their business and their families in the last few months to preserve for us all the opportunity to continue our service to the public.

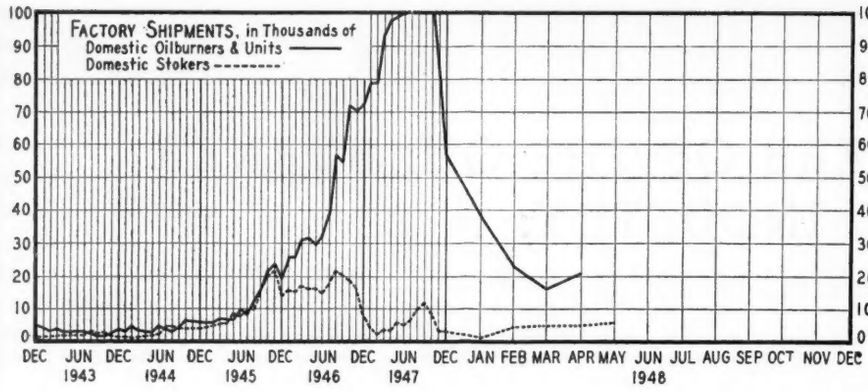
I feel that I am only voicing the sentiments of many others in publicly acknowledging my appreciation.

I hope that the foregoing may result in a better understanding of what OHI means to us, and possibly in additional memberships. The fight is not over—it must continue.

Why not show your appreciation of what has been done for you by giving your encouragement?

Scully Signal Company
Cambridge 41, Mass.

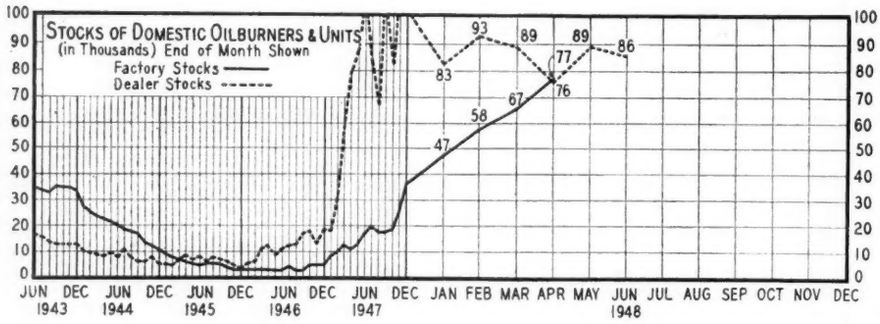
Frank P. Scully


FACTORY SHIPMENTS, in Thousands of
Domestic Oilburners & Units
Domestic Stokers
DEC JUN DEC JUN DEC JUN DEC JUN DEC JUN DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
1943 1944 1945 1946 1947 1948

Shipments of Oilburners and Units
(Including Exports)

Adjusted to include manufacturers other than the 152 reporting to Census Bureau, FUELOIL & OIL HEAT's estimates of shipments are:

	MAY			FIVE MONTHS		
	1948	1947	Percent Change	1948	1947	Percent Change
Conversion	16,490	77,468	— 78.7	83,534	363,394	— 77.0
Boiler units	2,628	5,297	— 50.4	10,270	18,140	— 43.4
Furnace units	5,411	16,922	— 68.5	28,685	71,965	— 60.2
All domestic	24,529	99,687	— 75.4	122,489	453,499	— 73.0
Commercial	2,193	4,520	— 51.5	12,046	23,027	— 47.7
Total	26,722	104,207	— 74.4	134,535	476,526	— 71.8

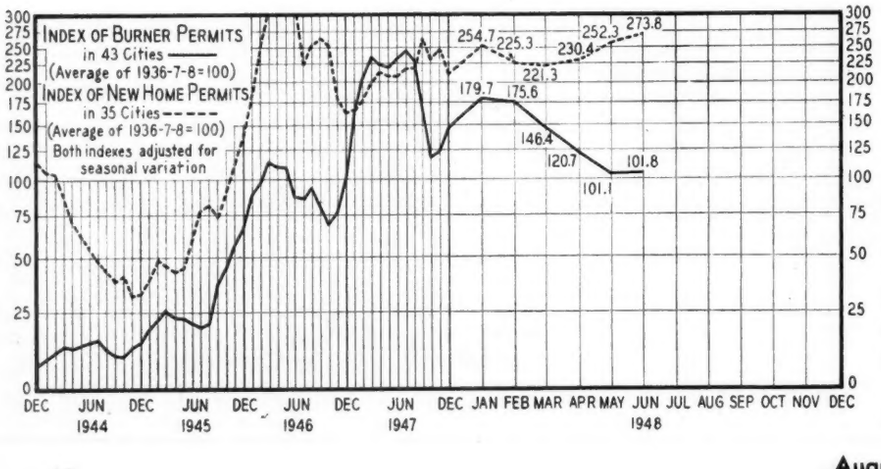

STOCKS OF DOMESTIC OILBURNERS & UNITS
(in Thousands) End of Month Shown
Factory Stocks
Dealer Stocks
JUN DEC JUN DEC JUN DEC JUN DEC JUN DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
1943 1944 1945 1946 1947 1948

June Minimum Retail Prices: Key Dealers

	CONVERSION BURNERS	BOILER-BURNERS	FURNACE-BURNERS
Highest	$500	$1100	$975
Lowest	235	450	300
June Aver.	346	710	617
May Aver.	349	712	628

Price Index: Conversion Burners: January 1940 is 100%

WHOLESALE				RETAIL			
June	147.7	Six months ago	143.3	June	150.5	Six months ago	148.3
May	153.5	Year ago	150.2	May	148.5	Year ago	145.6


INDEX OF BURNER PERMITS
in 43 Cities
(Average of 1936-7-8=100)
INDEX OF NEW HOME PERMITS
in 35 Cities
(Average of 1936-7-8=100)
Both indexes adjusted for seasonal variation
DEC JUN DEC JUN DEC JUN DEC JUN DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
1944 1945 1946 1947 1948

Oilheating Trends

PRELIMINARY ESTIMATES OF June installations of domestic oilburners and units were 44,533, substantially the best month of the year, and indicating some revival of consumer confidence in oilheating. The installations were divided: replacements 7,882; new homes 15,720; and conversions from other fuels 20,931.

Total installations for the first six months of the year are estimated to have been 167,355, or a drop of 57% from the first half of 1947. By types of installations, the first half of this year has seen 47,098 replacements; 55,611 new home installations; and 64,646 conversions from other fuels. Thus, the preliminary estimate of the new oil users added in the first-half of the year is 120,257, or an addition of about 3¼% to the number of oil customers at the first of the year.

BURNER STOCKS: Stocks of domestic oilburners and units in dealer hands on June 30 are estimated at 85,739, or about 3,000 less than the previous month. Factory stocks on April 30, the latest available data were 76,552.

SELLING TANKS: Dealers in June continue to push the sale of extra tanks, accounting for a total of 10,223. This compares with 13,932 in May and brings the total for the first-half of the year to a little over 53,000. The 275 gallon size continues to predominate in this extra-storage campaign, primarily because it sells installed for an average price of around $92. This is an excellent season to push tank sales, primarily for long range benefit in fueloil delivery economy, and in getting larger ratios of the year's demand moving in the summer months.

Size Characteristics of June Tank Sales

Size	Number
275 gal.	5,655
550	1,218
675	44
1,000	3,132
1,500	174

SPACE HEATER GROWTH: During the first half of the year the reporting fueloil distributors added to the number of space heater fuel customers 4%, based on those they had January 1. These reporting fueloil men do not represent a big segment of the space heater fuel market, but they do have approximately 175,000 such customers. This moderate

rate of growth, in view of the relatively high factory shipments of space heaters, would indicate that relatively few space heater installations are made in the first half of the year.

The 7,000 new space heater fuel accounts added by this group in the first six months are to be compared with approximately 9,400 such accounts added by this same group in the first half of 1947. It would not be reasonable to conclude from that comparison that space heater sales this year will be three-fourths of last year, since the first-half is such a tiny part of the total year's market that it should not be a basis for any important conclusions. However, in the absence of any other data on space heater growth this year, these are a straw in the wind.

DEALER OUTLOOK: At the end of June dealers throughout the country were of the opinion that their total 1948 sales would be about 43% below those of 1947. This had previously been checked at the end of April, or two months earlier, and at that time dealers had expected their 1948 business to wind up 46% below 1947. The month before that, or at the end of March, they had prophesied that their 1948 business would be off 42% from 1947. This shows that confidence was relatively strong in March, weaker in April, but is now slowly reviving. If 1948 sales should turn out to be about what the dealers expect, or 43% below last year, installations for the year would total 506,000. As an interesting coincidence, if we assume that the sales in the first-half of the year represent 33.5% of the full year—which was the average pre-war seasonal pattern—then total installations this year would run to just about 500,000. There are too many psychological factors in the market to feel at all sure that we are back to the old seasonal pattern, but in any event it is an interesting parallel.

There has been fairly strong feeling among some dealers and manufacturers that if the industry should see a decided upturn in August or September there would not be enough good men around to make the installations. The reporting dealers were asked their opinions on this. Of the lot, 81% say there would be no trouble whatever about manpower, while the other 19% believe that installation crews are too widely dispersed to be able to pull them back in the necessary numbers.

Oilburner* and Building Permits

OILBURNERS					DWELLINGS			
June		6 MONTHS			June		6 MONTHS	
1948	1947	1948	1947		1948	1947	1948	1947
335	547	741	6004	Baltimore, Md.	639	365	2428	1294
..	..	..	..	Binghamton, N. Y.	19	10	48	49
..	415	..	..	Boston, Mass.	33	74	171	158
49	133	330	586	Bridgeport, Conn.	..	..	..	..
..	..	..	..	Buffalo, N. Y.	..	23	..	96
..	..	..	..	Des Moines, Ia.	112	61	475	385
..	824	..	2257	Detroit, Mich.	772	891	4146	4511
26	77	247	236	Elizabeth, N. J.	4	7	9	70
35	28	91	175	Freeport, N. Y.	..	..	..	..
..	..	..	..	Greenwich, Conn.	24	23	119	102
79	133	468	890	Hartford, Conn.	..	..	..	..
16	63	61	231	Irvington, N. J.	3	2	32	12
..	..	..	..	Lynn, Mass.	31	12	79	53
..	49	..	165	Meriden, Conn.	..	..	..	..
151	320	758	1241	Milwaukee, Wisc.	226	96	970	521
54	184	478	770	Minneapolis, Minn.	151	87	650	402
17	33	114	146	Montclair, N. J.	..	..	..	..
..	..	..	..	Morristown, N. J.	6	..	7	..
25	54	89	210	Mt. Vernon, N. Y.	..	..	..	..
..	341	..	..	Newark, N. J.	..	..	..	..
43	51	348	340	New Bedford, Mass.	..	..	..	..
26	78	153	357	New Haven, Conn.	..	..	..	..
0	0	0	0	New Orleans, La.	..	..	..	..
..	..	..	..	New Rochelle, N. Y.	3	3	44	30
..	4676	..	27,285	New York City (total)	..	..	..	..
..	3701	..	22,372	Brooklyn-Queens	..	..	..	..
318	975	1989	4913	Manhattan, Bronx, Rchd	..	..	..	..
130	73	665	494	Norfolk, Va.	43	43	305	183
0	1	5	9	Oakland, Calif.	..	..	..	..
93	239	556	894	Omaha, Neb.	129	73	..	324
13	25	60	97	Orange, N. J.	1	1	7	4
30	45	110	..	Passaic, N. J.	..	..	..	..
46	122	180	453	Paterson, N. J.	14	5	50	19
508	1526	2051	5055	Philadelphia, Pa.	..	..	..	..
..	..	..	..	Plainfield, N. J.	9	4	44	95
35	125	129	523	Portland, Me.	20	14	84	74
549	784	2773	3874	Portland, Ore.	129	78	958	683
8	33	61	124	Poughkeepsie, N. Y.	..	..	..	..
35	75	254	571	Providence, R. I.	35	16	97	59
..	..	..	..	Reading, Pa.	6	4	18	11
53	215	361	550	Richmond, Va.	108	32	594	305
257	268	754	1156	Rochester, N. Y.	..	..	..	..
30	22	115	106	Rockville Center, N. Y.	40	6	114	67
23	19	86	159	Salem, Mass.	..	7	..	21
105	271	644	949	St. Louis, Mo.	..	33	..	173
40	265	509	1232	St. Paul, Minn.	104	93	474	433
78	56	418	454	Schenectady, N. Y.	..	..	..	..
..	..	..	..	Seattle, Wash.	..	127	..	1049
..	..	..	..	Springfield, Mass.	47	35	288	166
26	32	222	173	Stamford, Conn.	..	..	..	..
..	..	..	..	Syracuse, N. Y.	..	24	..	120
..	..	..	..	Trenton, N. J.	4	2	15	45
..	..	..	..	Utica, N. Y.	29	6	68	21
119	246	566	1373	Washington, D. C.	..	..	..	..
..	..	..	..	West Orange, N. J.	15	6	78	37
22	28	93	115	White Plains, N. Y.	8	12	54	27
66	80	354	462	Wilmington, Dela.	11	2	79	46
149	145	538	781	Worcester, Mass.	..	..	..	..
41	89	124	271	Yonkers, N. Y.	..	..	..	..
3630	7460	17,017	35,974	*Totals*	2769	2063	12,498	9788
—51.4		—52.7		*Percent Change*	+34.2		+26.0	

*Permits are not total sales in each market since none are reported from suburban areas, which normally account for 20% to 60% of total sales in each market; nor are they an accurate index where enforcement is lax. Rightly used, however, they are a useful working index.

GAS COMPETITION: Countrywide, reporting dealers estimate that gas heating installations in their markets during the first half of the year were off about 8% from 1947. About 35% of the reporting dealers estimated that gas sales were up anywhere from 20% to 100% over last year. As a coincidence, the same number, or 35%, estimated that they were down by percentages ranging from 18% to 100%. The remaining 30% of dealers estimated that gasheating jobs installed this year to be about the same as last year. This is somewhat encouraging, for it shows that while the oilheating industry is being held back and taking sharp cuts due to public fear of oil supply, its chief competitor, gas, is not making important gains. It is reasonable to expect, however, that after two or three years gas

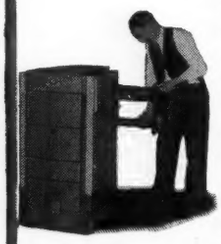
(Continued on page 128)

Announcing

THE NEW 1500 SMITH-MILLS OIL BURNING BOILER for small homes

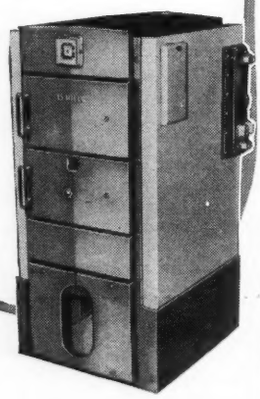
Again H. B. Smith, the leader in the development of integral boiler and hot water heater combinations, offers a new oil-fired boiler with built-in tankless heater — for the one-bathroom home. It's *compact,* because the heater is completely and neatly contained in the rear section of the boiler, without space-wasting outside heater or tank . . . *efficient,* because it provides a steady and ample supply of domestic hot water . . . *easily installed,* because it's designed for speedy assembly on the job.

But that's not all!



The new Smith-Mills 1500 is economical, efficient, simple in operation, good looking—all in all a clever package, typical of the *modern* H. B. Smith Co.

Be sure to investigate the new Smith-Mills 1500 when home-owners ask for a boiler that delivers the best at lowest cost.



H. B. Smith

CAST-IRON BOILERS

THE H. B. SMITH CO., INC.
68 MAIN STREET, WESTFIELD, MASS.
Offices and Representatives in Principal Cities

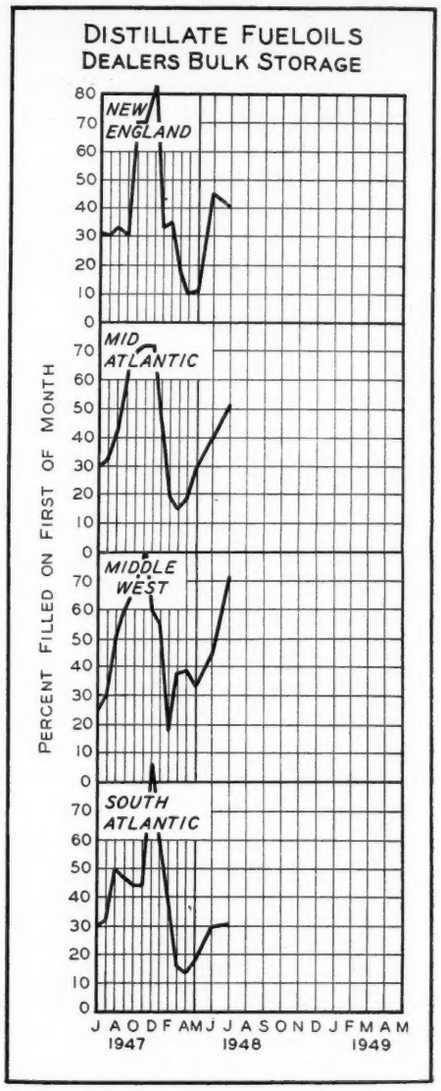
Fueloil Supplies

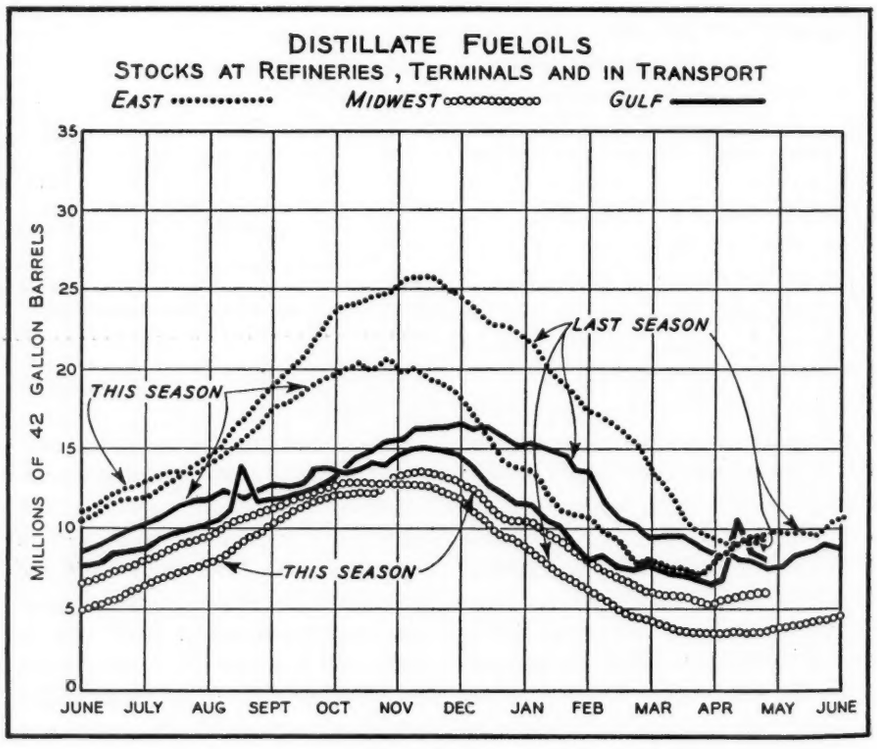
LOCAL FUELOIL distributors on July 1 had distillate stocks in their bulk tanks equal to 53% of their storage capacity. This compares with 31% on the same date a year ago, and with 41% on June 1 of this year. Kerosene stocks on July 1 were 42% of dealer storage capacity, compared with 25% on the same date a year ago and with 51% on June 1 this year.

DEALER STOCKS
(Thousands of Barrels)

	No. 2 or 3 Distillates	*No. 1, Range, Kerosene*
East Coast		
7-1-48	6,862	1,372
7-1-47	4,770	860
Midwest		
7-1-48	2,797	1,284
7-1-47	1,221	775
East of Rockies		
7-1-48	9,659	2,656
7-1-47	5,991	1,635
Percent Change	+61.2	+62.4

Distillate stocks at refineries, in primary storage or in transit on July 10, the latest available data, were 37,427,000 Bbls. in the area East of the Rockies, compared with 31,131,000 Bbls. for the corresponding week of the previous year, a rise of 6,296,000 Bbls., or 20%. The combination of dealer stocks and terminal stocks in the areas East of the Rockies show an increase over last year of around 10,000,000 Bbls.


DISTILLATE FUELOILS
DEALERS BULK STORAGE
NEW ENGLAND
MID ATLANTIC
MIDDLE WEST
SOUTH ATLANTIC
PERCENT FILLED ON FIRST OF MONTH
0 10 20 30 40 50 60 70 80
J A O D F A M J J A S O N D J F M A M
1947
1948
1949


DISTILLATE FUELOILS
STOCKS AT REFINERIES, TERMINALS AND IN TRANSPORT
EAST
MIDWEST
GULF
MILLIONS OF 42 GALLON BARRELS
0 5 10 15 20 25 30 35
LAST SEASON
THIS SEASON
THIS SEASON
JUNE JULY AUG SEPT OCT NOV DEC JAN FEB MAR APR MAY JUNE

Service Cost Studies

Spade and Baerenklau Look Over Contracts With Parts

THERE IS UNMISTAKABLE evidence that the oilheating public likes burner service contracts including parts, in the experiences of H. M. Spade, manager of the oilheating division of E. Robison Co., Hartsdale, N. Y., and Ed Baerenklau, service manager for Baerenklau & Co., Brooklyn. A brief look at the operating results of these two companies for the season ending May 31 shows that not only were the customers well taken care of, but also that increasing numbers want this kind of service assurance.

The dollar and cents experiences of the two metropolitan New York dealers were probably typical of what could be expected in other large city markets. Neither company believes that it has found the ultimate in service plans or burner operating economy but each of them feels sure that it is moving in the right direction.

Last summer Spade cautiously announced a service contract with parts, to cost $10 plus ½¢ per gallon on all fueloil bought during the season. Without fanfare or sales effort other than a mailed presentation, Spade got 946 customers accepting the arrangement out of a total of 2,750 oil accounts on his books. This season he raised the price to $15 plus ½¢ a gallon, and only two of last years customers failed to renew, with not one objecting to the higher price. This shows real satisfaction with their past experience.

This season his company is putting considerable sales effort behind the parts contract. Thus far, 60% of customers have accepted the arrangement and an additional 25% have ordered summer cleanup only, at $15.00. The sales force expects to convert enough of the summer cleanup orders to the full service and parts contract to bring this up to 75% of customers.

Baerenklau's customers are also saying that they like contracts with parts. Before these were tried the company was getting $20 for a contract to include a summer overhaul and cleanup plus any emergency service, but no parts. Under that arrangement in the season of 1946-47 the company got 600 contracts. Then last season a contract including parts, in addition to the service just described, and costing $23.95, brought a little over 1,200 orders. For the coming season the same deal is offered, and to June 15 more than 1,400 had signed up including all of those who had the contract last season.

Similar Cost Either Plan

Compared to Baerenklau's $23.95 price, Spade's deal cost customers an average of $22.50. The average fueloil gallonage of his accounts that had the service contract was just 2,500, and this brought in $12.50 on the ½¢ arrangement, plus the original cash payment of $10. During the coming season, Spade's people will pay an average of about $27.50, due to the $5 rise in the selling price of the contract.

Neither Spade nor Baerenklau include in their parts contracts replacement of tanks or combustion chambers. Also they do not include parts on the general heating system although they do include simple maintenance of the heating facilities at times when their men are at the house. The parts they do include in the contract are those on the burner and all controls having to do with the burner.

It is interesting that the two companies' costs through the first season were nearly the same. Spade found that labor and materials on the contracts averaged $14.16; with Baerenklau it was $15.18. However, Spade's men drive company trucks and the figure included no truck expense, while Baerenklau's slightly higher figure did include 35¢ an hour paid to the men for driving their own cars. Spade's primary costs, then, were 62.9% of his contract sale price, while Baerenklau's were 63.4%.

In raising his price $5 for the coming season, Spade was saying, in effect, that the primary labor and material cost on such contracts should not be above 50% of the sale price. He points out that his truck cost, his unproductive man hours and his shop and supervisory expense make this necessary during a season when only part of his customers are on contracts. He is convinced, however, that whenever he can get all of his customers on a complete service insurance contract his costs will be importantly lower because his service department can then plan the work so much better. He visualizes a time when there will be no lost man hours, because each will spend his full time going from job to job in a particular neighborhood, either on service calls or on unannounced periodic inspections and tune-ups.

As of now, Spade believes that within two years he can adopt universal insured service and make it mandatory with all oil accounts . . . and at considerably lower costs than are possible under the present system.

Larger Homes Predominate

The customers now buying service contracts from Robison (Spade's organization) tend to be those with homes larger than average, apparently because the pricing system works slightly to their advantage, or it may be because in general they don't shy away from the price. In a normal season the company's total gallonage averages 2,250 per customer, while those customers on service contracts average 2,500 gallons consumption.

Because the majority of oilheating dealers throughout the country have

shied away from service contracts including parts, it is useful to point out that Spade's average parts cost per burner on contract last season was $3.28, while Baerenklau's was $2.31. It is not clear whether the difference was due to the types of burners handled or the degree of liberality in interpreting borderline situations, probably the latter. In any event, the cost of parts on any large group of burners is insignificant. As to the parts not covered in the contract, such as tanks, combustion chambers and hearths, Spade says that the total company costs on the 946 contracts would not have been as high as $500, or around 50¢ per burner average.

Up to now Spade has exercised a limited amount of selectivity in taking service contracts with parts. About 10% of his oil accounts have burners that are either of a breed that require a lot of service, even when new, or else they are obsolete to the degree that parts are not obtainable. Westchester County, home of Robison company efforts, is a high income area and got a lot of burners installed many years ago. One-fifth of the burners supplied with oil today are over 15 years old, and some as old as 25 years.

When a burner is obsolete only in the sense that the style of controls has been discontinued, and hence no parts available, Spade will take a service contract with on proviso: if the control should fail, the owner will pay for a new one, but not for the labor to install it.

Baerenklau had some very interesting detailed figures on his first year's experience with parts contracts, as well as on his total service for the season.

His 10 service men handled in all some 3,500 burners, making 14,765 calls, or an average of 4.2 per burner. Deducting from this total the 2,960 calls made for vacuum cleaning or summer overhaul, the average regular type service calls were 3.4 per burner, though this did include quite a large number of inspection calls on the accounts with service contracts. This latter point was particularly a factor after the middle of February, when there was not enough work on calls to keep the crew busy, so they did a lot of inspection or maintenance work. Baerenklau is convinced that this prevented quite a number of later calls and he is also sure that these inspection trips save parts because his men reported numerous instances where some part was in bad shape and just saved by the voluntary call.

Calls by months during the past season were:

June	1102	December	1197
July	1158	January	1279
August	1301	February	1187
September	1890	March	1001
October	1318	April	812
November	1381	May	1139

The total Baerenklau service department income for the season was $41,369.53, or an average of $11.82 per customer of all types. That average figure is held down by the fact that less than half of the 3,500 customers that got some form of service during the season ordered either the service contract or the summer overhaul and vacuum cleaning . . . the operations that insure lowest oil consumption.

Summer overhaul jobs by Baerenklau's men numbered 1,512 and vacuum cleaning jobs were 1,448. In this company's routine, the two are distinct operations performed at separate times. Vacuum cleaning is done with five-man crews. A truck with one mechanic and four cleaners moves into a neighborhood and drops a cleaner and his equipment at each of four homes. The mechanic then assists and supervises the work of the four until they are cleaned up and ready to move to another batch of four houses. The burner overhaul or tune-up work is done later by top men.

Costs on this work are interesting to check with your own experiences. Vacuum cleaning labor averages $3.26 and summer tune-up labor averages $2.40. For a vacuum cleaning and tune-up, where the customer is not on contract, the charge is $14. On vacuum cleaning work, the cleaners are paid $1.10 an hour and the mechanic that supervises them $1.37½.

Another useful figure in the Baerenklau record is that all parts supplied, including those free on contracts and those charged, either on contracts or to non-contract customers, represented an average of only $3.57 a customer. Notice that this included tanks, chambers, hearths and everything else recorded aside from labor. It also includes the profit on the parts actually sold outside of the contracts.

Service costs on new burners still in the warranty period are sometimes hard to isolate. With Baerenklau this averages $10.40 per new burner for the year.

For some years oilheating has had pretty easy going as to competition from other fuels, at least in most parts of the country. Coal has become unpopular and gas in many cities is choked until it gets more lines. But intelligent burner men know that a revival of real competition, particularly with gas, is not far in the future. Development of better burner service plans is very important to long range public liking of oilheating.

Many of the better burner dealers are now feeling their way—trying this and that as they search out the ideal plan. Some of them, like Baerenklau and Spade, are glad to share their experiences . . . their experiments . . . for the general stimulation of industry thinking.

H. M. Spade

Ed Baerenklau

Use Your Draft Gauge!

Readings Help Determine if Pulsation is Caused by Draft

by
J. W. Schulz

THE CHIEF ENGINEER of a furnace manufacturer recently related how his smallest oil-fired unit had caused quite a few dealers to complain about flame pulsation. Laboring under a false impression at the time, he would tell dealers that the furnace was so well-designed as far as draft requirements were concerned that in the factory's test laboratory it operated properly, at peak efficiency and silently, with no smokepipe hooked to it. So, he would reason over the telephone to the dealers, where the furnace gave flame pulsation on an actual installation there must be worse than no draft on its smoke outlet—the smoke outlet draft must be positive, and a bad smokepipe or chimney must be to blame for the flame pulsation.

"For weeks, all the dealers I spoke to swallowed my story, which I know today was entirely wrong," the furnace engineer laughs today, "but the joke was on me as much as on the dealers, since the faults which actually caused the pulsation were not eliminated from the furnace-burner unit during the months that I kept on thinking that plus pressure in the smokepipe was the only reason for our pulsation.

"Most of our furnace dealers have draft gauges, and perhaps I made a mistake in assuming that these gauges were being used, and used at their maximum effectiveness. At any rate, there finally came the day when I told a dealer that flame pulsation, if there was any in our small unit, resulted from plus pressure in the smokepipe. The same day, that dealer phoned me back to give a description of the practically perfect chimney and smokepipe on the trouble job and readings of .2" over-fire draft and .06" smokehood draft."

To get down to the naked truth which this furnace design engineer finally faced squarely, the facts about chimney performance must be faced when pulsation problems arise. These include the points that (a) when the chimney is stone cold, it gives zero draft, yet a furnace-burner unit must start properly on a spring or fall day after no heat has been needed for a week or longer and the chimney therefore is cold; (b) connected to no smokepipe and no chimney, a furnace or boiler may behave far better with respect to flame sound and pulsation than connected to a chimney which gives excellent draft; (c) flame noise and pulsation tendencies often are related to the design of the oil-burner and the characteristics of the firebox and nozzle, and such factors of furnace or boiler design as the volume and shape of the combustion space and the velocity of the gases in the combustion space and flue passages. Unfortunately, freedom from fuel-wasting air leaks or gas leaks, a characteristic of many new oil-designed furnaces and boilers but not of already-installed old furnaces and boilers designed for hand-fired coal, definitely makes for greater trouble with pulsation.

Draft Check-Up Notes

	Normal	Maximum
A. Smokehood Draft	.05"	.08"
B. Over-Fire Draft	.03"	.06"
C. Draft Drop (A-B)	.02"	.02"
D. Chimney Draft	.07"	.11"
E. CO_2 Reading	9.5%	
F. Stack Temp.	685°	
G. Firing Rate	1.0 gph	
H. Smokepipe Size	6"	
I. Chimney Flue Size	8x8	
J. Chimney Height	35' est.	

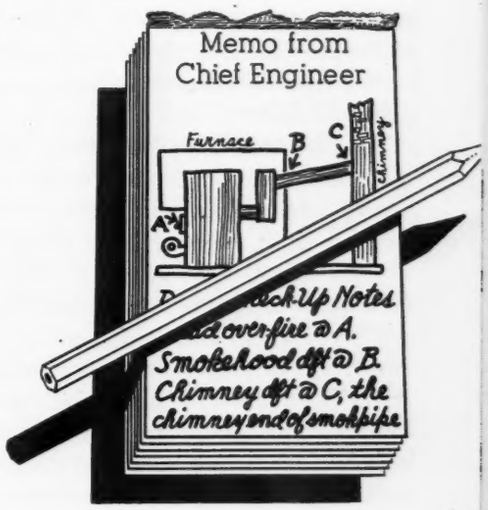
Notes- Smokepipe long, no slope, part plugged. Chimney straight tight, very good. Note by HC.- 7/1/48

In addition, poor draft can cause flame noise and pulsation. The big point is, as this furnace design engineer points out, that it takes a smart equipment dealer or service man to use a draft gauge properly in arguing down the assertion that the flame pulsation on a trouble job is caused by poor draft. If poor draft is not to blame for pulsation that causes service call after service call, speedy progress in ending the trouble can be made only by ruling out possibilities that the smokepipe and chimney are to blame. Then come the steps of diagnosing the trouble properly and applying the proper remedy for it. If the remedy involves improving the design of the equipment, it is of course beyond the scope of the dealer's and service man's work.

The accompanying table, "Draft Check-Up Notes," tells a rather complete story of the draft conditions of an installation.

The smokehood draft is read by using a test opening in the smokehood of the furnace or boiler or punched in the smokepipe at a location within about 12" of the smoke outlet of the furnace or boiler. The over-fire draft is read through the flame observation door; it tells the pressure over the flame. The draft drop is the difference between the first two readings, and depends on the design of the flue passages of the furnace or boiler. If the draft drop is .04", for example, a smoke outlet draft of .04" is required to keep the over-fire draft at zero; and to keep the over-fire draft at .02" takes .06" smokehood draft. The draft drop of small units, for up to 1.5 gph, seldom is higher than .03", since most units are intended to operate with negative over-fire draft when connected to typical domestic chimneys.

The chimney draft (item D in the notes) can be ascertained easily by applying the draft gauge to an opening within about 12" of the chimney end of the smokepipe.



The "Normal" readings are taken with the equipment operating in the usual manner, with the draft regulator on the smokepipe adjusted properly. To obtain the "Maximum" readings, the burner is operated with the smokepipe draft regulator blocked in the position which gives the maximum draft the chimney can give.

The minimum draft which should be obtainable from a small chimney (suitable for a furnace or boiler fired at 1.0 to 1.5 gph), with the draft regulator blocked in its maximum-draft position, seemingly is in the neighborhood of .05", to judge from draft readings obtained on hundreds of installations. There are two strings to this. The stack temperature must not be entirely too low when this yardstick is used, since low stack temperature causes a good chimney to give a poor draft. In all common sense, if the stack temperature is lower than about 400°, it can be blamed for a small chimney's being unable to develop .05" draft. The second string concerns the CO_2 percentage. As with very low CO_2 the volume of the products of combustion is inordinately great for the gph rate of the fire, a CO_2 reading under about 6% can be to blame for a small chimney's being unable to develop at least .05" draft.

Suppose it is assumed that .05" is the minimum draft for a small chimney, that extremely low stack temperature or low CO_2 are not to blame for the poor draft, but that a particular chimney develops but .02" draft as its maximum. Very likely, a furnace or boiler connected to this chimney will give trouble. There may be oil odors in the equipment room, or the flame noise or pulsation first mentioned in this discussion. Again, it may be impossible, because of the poor draft, to obtain good combustion from the oilburner. Where may the trouble lie?

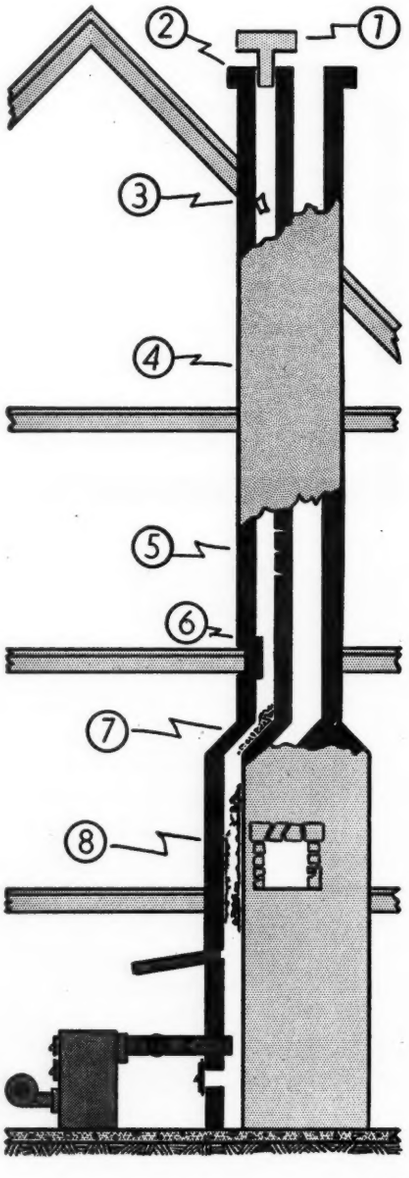
The accompanying table, "Diagnosis and Correction of Draft Troubles," lists 20 frequently-encountered reasons for poor draft, together with suitable remedies. True, some of the remedies are expensive. However, the oilheating plants you install and service probably cannot operate properly without proper draft. The millions of homes which are equipped with good chimneys were not built by fools, who threw good money out the window in building these chimneys. You may have to point out these things to the owner of an inadequate or defective chimney, and tell him in addition that, to enjoy the same satisfactory oilheating as is enjoyed by his neighbors, he must do the same thing they did and invest sufficient money to start out with good chimney draft.

Use your draft gauge to back up your arguments about chimneys! Properly used, it will avoid your assuming that a good chimney gives poor draft and is responsible, for example, for flame pulsation—and it will avoid your failing to find out on a trouble job that poor draft is responsible for your headaches.

Diagnosis and Correction of Draft Troubles

1. "Draft Inducer" at top of chimney undersized or of poor design.

Remove gadget-type accessories and measure the draft obtained without them. Don't try to offset insufficient flue area, chimney height, or other basic shortcomings by adding a contraption to the chimney top.



2. Chimney too low.

Make chimney at least three feet higher than highest part of roof or any tree or building within 30 ft. of the chimney.

3. Flue obstructed

Locate and remove any bird's nest, or piece of brick or tile which blocks the flue. Lower a light down the flue; insert a mirror in the smokepipe or clean-out door opening at the bottom of the chimney, and look up the flue.

4. Insufficient or excessive flue area.

Usually a flue of the wrong size is too small, but an oil-fired water heater or a warm-air furnace of exceedingly low capacity sometimes is connected to a flue greatly oversize . . . then, the chimney stays cold and gives no draft.

5. Leaks caused by poorly-made joints or breaks in the tile lining.

Make a smoke test by building a hot fire in the base of the chimney by burning paper, adding damp paper and tar paper to the hot fire, and having a man close the top of the flue tightly with damp canvas and a board. If smoke pours out of adjacent flues or comes out in the house, the tile lining has bad leaks which need repairs made by a chimney-repair expert.

6. Beam juts into and is supported by chimney.

Careful examination (see item 3) reveals this shortcoming, often found in the older houses in certain areas; expensive repairs usually are needed to obtain good draft.

7. Flue runs diagonally instead of vertically.

A mildly-sloped flue often works well for years once cleaned thoroughly . . . especially if the oil flame is clean-burning and deposits no soot in the flue.

8. Flue simply needs cleaning.

The draft readings of many chimneys which have not been cleaned thoroughly in five or six years usually can be increased 25% to 50% by cleaning the smokepipes and chimney flues, and eliminating all air leaks of the smokepipe and furnace or boiler.

(EQUIPMENT ROOM DEFECTS)

9. Gas, oil, or coal water heater is connected to flue which serves the oil-fired heating plant.

To eliminate this shortcoming may not be feasible. Yet, it reduces the heating plant draft . . . may cause insufficient draft. Gas and coal water heaters usually have draft-breakers and regulating dampers which permit cold air to enter the smokepipes and chimney flues, thus often cause heating plant trouble.

10. Smokepipe of furnace runs level, sags, or slopes the wrong way.

A slight slope is sufficient. Try to have the smokepipe go upwards at least ½" ("1 is better) for each foot of length. Avoid having any part of the smokepipe run horizontally, without proper slope. Use sheetmetal screws to fasten together the different lengths of smokepipe, and wire up the smokepipe securely and permanently.

11. Smokepipe plugged or partly blocked.

Remove and clean. Adjust burner to avoid soot deposits. If the trouble continues, consider switching to lighter fueloil.

12. Air leaks in smokepipe.

Locate by candling and examining smokepipe for soot marks. Seal with furnace cement or replace smokepipe. See item 10.

13. Smokepipe extends into flue opening.

Cut off the smokepipe and install it so that it does not extend too far into chimney. Better cement in a good smokepipe thimble if the chimney lacks one.

14. Air leaks in boiler or furnace . . . at clean-out and firing doors, smokehood, base, and between sections.

Locate leaks; seal with furnace cement; repair or replace defective parts.

15. Loose-fitting, leaky chimney clean-out door at base of chimney.

The door may have to be bolted shut, then the crevices sealed with furnace cement. See next item.

16. Air leaks at bottom of chimney flue, below smokepipe.

This defect is encountered frequently, the tile lining extending downwards only somewhat below the smokepipe and not to the clean-out door of the chimney, or being poorly fitted near the basement floor. A large cavity in the chimney base often receives air from many large air leaks. In many homes, therefore, it is best to bolt shut the chimney clean-out door and fill the lower part of the flue with sand to the level of the bottom of the smokepipe, topping this off with building cement. In the future, the smokepipe opening will be used for clean-out purposes. Following this procedure often improves draft by .02" to .05" and solves the draft problems.

17. Smokepipe overly long.

While exceptionally long smokepipes do reduce fueloil consumption by giving basements "free heat," when longer than 8 or 10 ft. they may drop the smoke-hood draft a few points. Good slope is especially important with long smokepipes; smokepipe size is important . . . the overly long smokepipe should be 1" or 2" larger size than ordinarily is installed for the same gph rate. The smokepipe should not be exceptionally long if the stack temperature is unusually low, say lower than 450°.

18. Too many elbows in smokepipe.

Some experts say that a smokepipe should not have more than two 90° elbows; others say three is the maximum.

19. Furnace or boiler flue passages dirty.

Use a draft guage to take over-fire and smokehood draft readings. Compare these. If the draft-drop through the flues is considerably greater than you know is experienced with the flues clean, then flue-cleaning is in order to reduce the over-fire draft. Avoiding high draft-drop caused by a thick layer of soot is important with the modern oil-furnaces and oil-boilers which give low stack temperatures because of the high velocity of the gases passing through the flues.

Socony Price Rise Carries Improved Margin

SOCONY VACUUM OIL CO. on July 15 increased prices of gasoline, kerosene, and heating oils from .2¢ to .6¢ per gallon generally throughout New York and New England. Considerable relief was given on margins to fueloil distributors. For example, at New York City the rise in tank car price was .2¢, the rise in yard price was .3¢, while the rise at the tank wagon or retail level was .6¢. In other words, dealers with their own bulkplants got an improvement in margin of .4¢, and those who buy under-the-rack were blessed with an extra .3¢. That market showed the largest margin improvement, but margins were raised in such points as Boston, Providence, Westchester County, Long Island, Rochester, Syracuse, Plattsburgh, and various Vermont cities.

The new margin on No. 2 oil in Brooklyn, for example, is 2.7¢ to fueloil men who buy under-the-rack. Specifically, the tank wagon or retail Brooklyn price is now 12.9¢, the yard or under-the-rack price is 10.2¢, and the harbor-barge price is 9.5¢ . . . this is what would be paid by an outfit with a tidewater bulkplant.

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Ample Tankers Next Season With 171 Additions to Fleet

THE NATIONAL PETROLEUM Council's tanker transportation committee, of which F. R. Pratt of Socony-Vacuum is chairman, reports that by the end of this year there will be in use throughout the world 171 more tankers than were active at last winter's peak. The committee concludes that the supply will be adequate for all needs.

Moreover, an additional 277 are under construction or on order, all to be delivered beyond this year, as follows: 68 in 1949, 69 in 1950, 75 in 1951, 55 in 1952 and 11 in 1953.

The world tankship fleet on April 1 of this year totaled 1,264, of which 1,012 were in commercial use and the balance in Government use or out of commission. Of all tankers, 35% are owned by the U. S. and an additional 43% by the ECA countries of Western Europe.

Integration for Fueloil

Arrow of Chicago Drills Wells, Refines, To Insure Its Supply

by
Robert Gray

THROUGHOUT THE COUNTRY there are probably no more than ten fueloil distributors who sell at retail 50 million gallons of heating oils annually, not including bunker oil.

When any company reaches that stature it has problems not found in more normal-sized operations and it also has unique opportunities to try things . . . new ideas and methods that others couldn't afford to chance. Likely as not the two are related—the problems and the opportunities to explore solutions. If it turns out that a particular experiment didn't work, the loss is usually trivial in comparison to the company's total outgo for the period.

It is to be expected, then, that these very large fueloil marketers would try new things, develop fresh techniques and in general display original thinking. The Arrow Petroleum Co. of Chicago is the example around which this article is built. Arrow's active operating head is Carl Jonswold, executive vice-president. Jonswold is better known throughout the oilheating industry than is his company, largely because of unusual recognition he has had in industry association activities in very recent years.

A company as large as Arrow can afford to have quite a crop of experts on the payroll, and logically these men are hunting and finding solutions to problems every day in the year. But to the big fueloil marketer there is always one problem that overshadows the others . . . and particularly so in the last few years . . . the problem of getting the needed fueloil to take care of old and new customers.

There is always the possibility, real or imaginary, that some big supplier may find his own needs changing and decide to lop off 10 or 20 million gallons from the quantity expected by the marketer. It's true that major companies rarely impose such hardships on the better type of accounts, but nonetheless it can happen.

Back in 1942 Joe Healy, president of Arrow, saw the supply handwriting on the wall and took action to get the company into a more secure trading position for its postwar growth. He bought a refinery down state at Centralia, 50 miles east of St. Louis and 300 miles from Chicago. It is a 4,000 barrel a day straight run topping plant, somewhat outmoded by today's big cat crackers yet a mighty comfortable facility to have, things being as they are. Before the end of the year the capacity will be raised to 5,000 B/D with the installation of some Phillips cracking equipment.

Notice, however, that the present 4,000 barrels daily amount to over 60 million gallons a year, or a greater total than Arrow sells in its Chicago retail operation. Actually, none of the refinery output ever gets to Chicago, for a 300-mile rail haul would make it expensive. Instead it is sold in the Southern Illinois-St. Louis area to local independent jobbers or else it is traded to some major in exchange for supply at Chicago.

For example, a major refiner bringing up barge loads of fueloil on the Mississippi River could deliver them to Arrow's marine terminal at Chicago (through the Illinois River and Drainage Canal) and take in exchange gasoline from Arrow's refinery delivered to down state country jobbers.

Exchanges New to Fueloil

Getting supply through exchanges has been common practice in the oil industry for generations, but it is anything but common among fueloil distributors.

Carrying the idea of supply swapping to its logical next step, Arrow went after its own crude oil. In the oil fields of Illinois, Indiana, Kentucky and Oklahoma good oil prospectors and drillers were financed by the company to go out and get their own leases, then dig for the stuff. The crude they get supplies the refinery or else is traded for something more convenient to move.

The newest endeavor in this direction is actual field development in Wyoming by the officers of the company. North of Lusk 10,000 acres were leased, three producing wells brought in and a fourth is ready to go—no dry holes yet. The output from the three wells seems rather unimpressive at 500 barrels a day, but it sounds bigger when called 8 million gallons a year to be traded for something.

Several major companies have refineries in Wyoming so Arrow's crude is used locally in exchange for products at Chicago.

Safety Valve Facilities

In describing Arrow's swapping capabilities, it is not intended to convey the thought that the company is in general a spot buyer. On the contrary, more than half of its fueloil needs have for years been furnished by Shell and there are other long-standing connections, but in today's tight market the independent crude oil supply and refinery operating position can't fail to bring flexibility and self-confidence in negotiations. Moderate expansion can be undertaken without too much anxiety.

During the past four months, Jonswold has added about 10% to the number of his domestic fueloil accounts, largely through advertising in the city and suburbs . . . 800 new customers. Further expansion this year will be carefully matched to new deals for supply growth.

In its direct consumer business, Arrow favors residential central heating accounts and No. 5 oil commercial and apartment business. It quit No. 6 business some time back—couldn't make it pay at retail in Chicago. Of course down at the refinery it does sell its residual to industries.

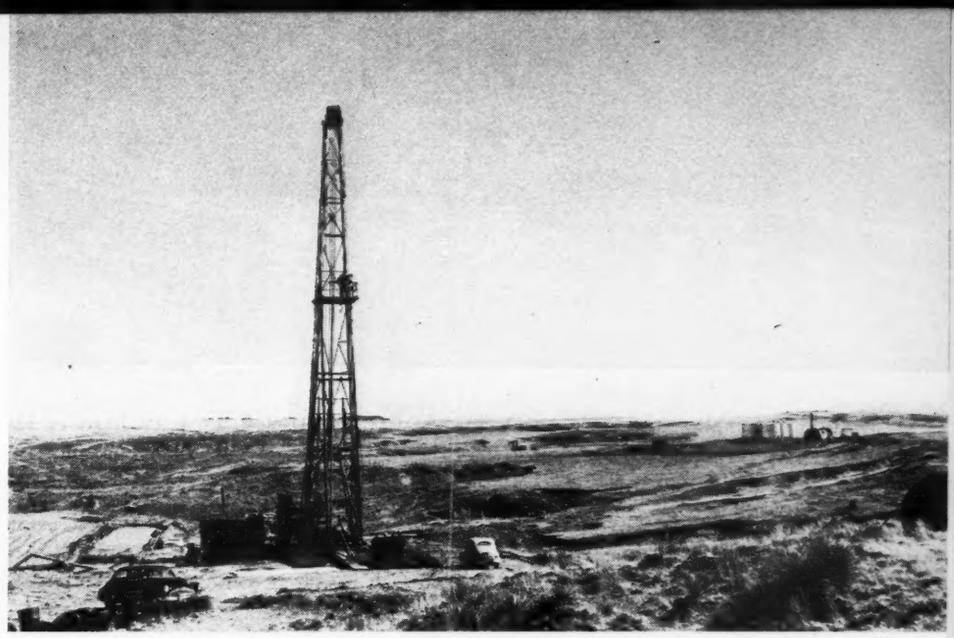
An analysis of Jonswold's Chicago sales indicates something over 55 million total gallons last year, of which five million were gasoline, the balance fuels. There were 8,000 residential heating customers and 2,000 commercial and apartment accounts on No. 5 oil. About

six million gallons were sold to rack buyers, "under the spill."

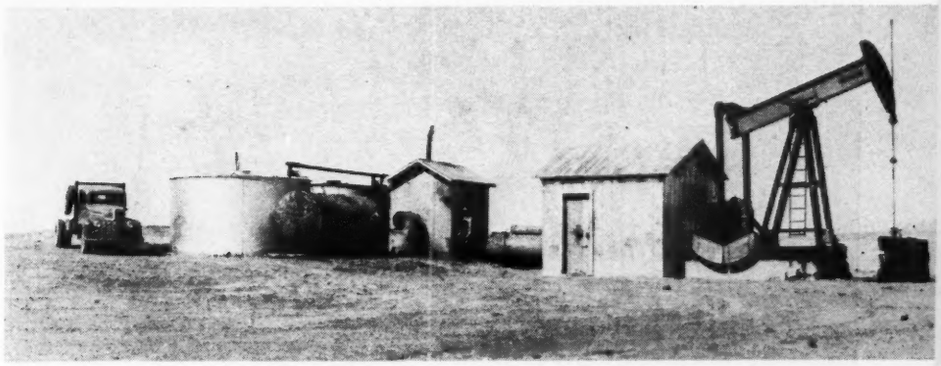
Just getting into the oilburner business, the company sold 500 G-E's last year and has taken on Preferred Utilities' line of heavy equipment and steam generators. The photographs bring more detail of Arrow's activities.

Carl Jonswold, executive vice-president and active manager of Arrow, came into the Arrow picture when Joe Healy, Arrow president, bought Triangle Oil Co. back in 1935. Subsequently made Triangle president, Jonswold took his present position when Arrow and Triangle merged in 1945. Little known outside of Chicago four years ago, Jonswold has become a national figure in the fueloil industry.

He became the second head of the O.H.I. Distribution Division, succeeding Frank Spencer, and is now Chairman for the East of that Division, as well as a director of O.H.I., chairman of its Fueloil Supply Committee and member of its highly important Publicity and Legislative Committee. Jonswold is president of Chicago's Burning Oil Distributors Assn., a group he helped to establish 20 years ago, and is also an active member of the Marketing Committee of American Petroleum Institute.



Wyoming hills are not so green in this view of Arrow's drilling operation in the Ant Hills Field north of Lusk. With 10,000 acres leased, three wells are completed, a fourth ready to bring in. The crude is traded to local refiners for fueloil at Chicago. The company also finances oil prospectors in the Mid-Continent field, gets their crude for its refinery at Centralia, Ill. The pump jack in the lower picture takes over after the derrick moves on, lifting oil from 5,100-ft. depth, or nearly a mile in the earth.

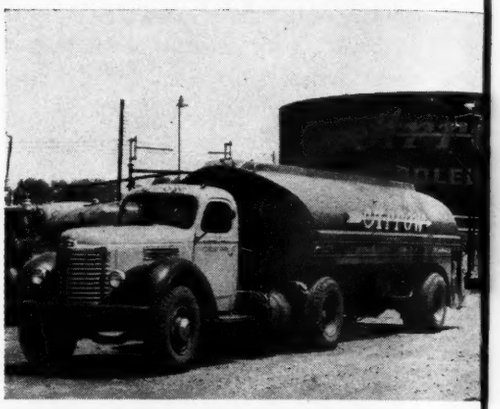


Arrow's refinery at Centralia, Ill., produces only 4,000 barrels a day, but that is a great help in a trading market. Crude oil arrives on Sohio pipeline from the company's own financed producers in the Mid-Continent field. Refined products are sold to Southern Illinois jobbers or else traded to majors in exchange for fueloil delivered to Chicago. Current yields are: Gasoline 31%; Kerosene 12%; Distillate heating oil 16%; balance gas oils and residuals —no lubes are made. New cracking facilities will be added this fall.

Marine terminal on the Chicago Drainage Canal. Arrow built the first, shown at center with 15 tanks, some black. Other oil companies subsequently built neighboring tank farms. Oil moves in by barge from the Mississippi through the Illinois River to the canal, or else by tanker from Toledo through Lake Michigan to the canal's other end.

Arrow's fueloil capacity here is 12 million gallons. It also has a million gallon storage at its head office in Forest Park, and 200,000 gallons each at four neighborhood bulk plants located in Glen Ellyn, Chicago's near North Side, its Mid-South and Far-South sections. All fueloil orders come to the head office, are phoned to plants.

Tractor-trailers deliver most of Arrow's fueloil to household accounts, bring real savings in delivery costs and have other advantages. The company has 27 such units of varying size, with 15 of the illustrated 4,000 gallon size calling on homes. It also has 14 straight tank trucks



which it is not replacing as they wear out . . . other than with trailers.

The 4,000 gallon units consistently average two loads to a 10- or 11-hour day with one man. They can go any place in the Chicago marketing area, get into alleys when necessary. They carry 150 ft. of 1½" hose. Arrow originated the idea of using a separate gasoline motor to pump the oil—with a starter. There's an electric motor on the hose reel, battery operated.

Jonswold plans to standardize on one tractor-trailer type for economy in parts and service. He has learned that it pays to use a husky tractor and now plans to buy nothing smaller than a 450 cu. in. motor. They get away so much faster in city traffic. He has used a number with 360-inch motors or even lighter, but finds them only good for over-the-road hauls where you can start slow as you like and then roll. Of course this all applies to the 4,000 gallon load.

There are several reasons, other than strictly delivery cost, why Jonswold prefers trailers to ordinary trucks. For one thing, he explains that if you should have trouble with several tractors at once you can hire some, because anybody's tractor will fit your trailer. It would not even be necessary to own all tractors; you could find tractor owners who have other work who would haul your trailers in their off-season.

Tractors simplify a company's doing other types of business, as for example, Arrow is in the road business, putting asphalt topping, 2 to 4 inches thick, on

Accounting novelty is Jonswold's glorified "country grocer" system. These special desks take the place of accounts receivable ledgers. Drivers make triplicate bills on delivery, leave one with customer. After day's bills are totaled, they are filed in each customer's individual card pocket in this Kardex system, and that is the only record of the account.

When bill is paid the ticket is removed from this desk to permanent storage paid file. The customer's pocket card in the system carries credit information and also tabs along the top showing due dates, so that it is always easy to spot past due ones.

The girls at the desks (Muriel Strubbe in the photo) handle slow accounts with form letters for 45 days, then if not paid refer them to credit manager. Each girl handles 2,000 accounts, must OK all deliveries before they're made. Each month the girls give the credit manager a list of past due accounts, and there is a friendly competition to show the least number.

The Kardex system eliminates machine bookkeepers, which Jonswold thinks is reason enough to have it if there were no others. Machine operators to him are a headache—they're temperamental, hard to find, and if you train your own they immediately leave for the highest paying spot in town.

old gravel or concrete roads. This is a summer activity and not only uses a lot of the company's tractors but also 20 of its fueloil drivers. The company is applying over a million gallons of asphalt for the city of Chicago this summer.

Some interesting comparisons of delivery costs on No. 2 oil, between straight trucks averaging 1,300 gallon size and the 4,000 gallon trailers, are shown in the table. The trailers appear to offer a net saving of .153¢ a gallon or 20%.

Delivery Cost Comparisons

Small Tank Trucks, Averaging 1,266 Gal.
Tractor-Trailer Units, Average 4,000 Gal.

	Small Trucks	*Tractor-Trailers*
Gallons per Season	881,988	1,816,091
Miles Traveled	14,210	13,313
Hours Worked	2,205	2,482
Miles per Trip	17	22
Gallons per Mile	61.6	136.4
Total Cost per Gallon	.75¢	.597¢*

*Actual cost was less than this, but average drop size was greater than with the small trucks. This figure is after adjusting to equalize drop sizes. Total costs included gasoline, oil, tires, repairs, insurance, depreciation, driver wages and miscellaneous.

OHI Directors Hear Brighter Oil Supply Report

FEARS OF ANOTHER short fueloil supply picture next winter all but disappeared for directors of Oil Heat Institute who heard a complete report of the activities of the Legislative and Publicity Committee at Portsmouth, N. H., July 13.

Chairman Matheson presented a documented report of three months of intensive activity indicating almost a complete reversal of the gloomy situation which faced the industry at the time the committee was formed in the spring. Educational activities with government officials, petroleum company executives and oil groups who make publicity policy have been instrumental in creating a sympathy with the point of view of the oilheating industry which was lacking last winter.

The committee work is to be continued indefinitely into the future to keep the oil industry informed of the needs and probable demand the industry is creating, so that distillate can be made available at the places and at the time it is required.

Only one questionable spot was noted in the oil supply situation. Production and shipments of oilfired space heaters already appears to be approaching the level estimated for the entire year, and fear was expressed that kerosene and light distillate demand might outrun the additional supply unless vaporizing burner sales were slowed. No such fear was expressed for the supply of No. 2 and No. 3 oils commonly used in central heating equipment, since sales of new burners are running below the estimated safe level for the year. In view of all limiting factors, the consensus of speakers before the board meeting indicated that active sales campaigns will have to be instituted and pushed vigorously to reach the sales estimates of earlier months this year. There was real concern expressed for light oil supply for space heating equipment, and the possibility was expressed that a renewal of unfavorable publicity on kerosene supply would seriously affect public acceptance of all oilburning equipment.

Mr. Matheson pointed out after he had concluded his report that the unfavorable oil shortage publicity was not the sole cause of the slackening of oilburner sales from 1947 levels.

"The oil shortage scare coincided almost exactly with the saturation of our easy market," he said. "Even if we had not had the unfavorable supply publicity it is likely that we should be in a poor sales position this year compared with last. Our shipments of nearly a million burners and units last year supplied the automatic demand for oilheating equipment and brought us to the necessity of creating a new demand for our products. We haven't even started on that job and the start is long overdue. From now on, regardless of oil supply publicity, whether good or bad, we have got to sell. All your committee can do now or in the future is to create and maintain a favorable climate for our selling effort. Our prospects are all through phoning in their orders. The manufacturer or dealer who waits in his office for them to come in and buy may have to wait a long time."

Several individual cases of successful selling were cited. Francis Gilbane observed that there was a decided difference in the attitude of buyers. His company recently has sold 20 burners by keeping the showroom open Wednesday evenings for shoppers, but he reports 18 of the 20 sales were financed with installments, whereas a year ago about the same 90% were bought for cash.

C. E. Lewis, vice-chairman of the Planning Committee recommended the activation of the vertical sections which were authorized at the last annual meeting. To get the program underway he announced the appointment of temporary chairmen to get five of the authorized sections organized. These were: Paul K. Addams, Fitzgibbons Boiler Co., for the Boiler Division; Carl Sahler, Thatcher Furnace Co., for the Furnace Division; A. T. Atwill, Quaker Manufacturing Co., for vaporizing burners; Ed Groves, Petroleum Heat & Power Co., for horizontal rotary burners; and R. S. Bohn, Preferred Utilities Mfg. Corp., for the Unit Steam Generator Division.

A. E. Hess, managing director, gave a report on current activities and the outlook in which he told of a survey of tank manufacturers now being completed which indicates a possible shortage of steel tanks for the expected installations this fall. He urged dealers and other installers to order and take delivery on all tanks they will need for the rest of the year.

It was recommended by the Planning Committee that the Steel Committee be re-activated immediately to help make tanks available. There are 153,000 tons of steel to be allocated for farm and home oil storage tanks in the petroleum industry steel allocations. It is believed urgent that these tanks be made available now for new installations and for additional storage of fueloil for existing oilburners.

A Show Committee was appointed by President Bohn to start plans for the 1949 Oil Heat Exposition to be held at Boston, May 16-19, 1949. The committee held its first meeting at Portsmouth following the directors' meeting.

The next meeting of the Board is to be held at Chicago in October. The exact time and place is to be announced.

Fueloil on the Farm

Oilfired Radiant Heating System Popular with Turkey Breeder

by
Walter Rudolph

RADIANT HEAT for poultry brooder houses is becoming increasingly popular. Turkey breeders especially, who must "baby" their poults much more than is required for hardier chicks, look to such heating to solve many brooding headaches . . . and oilfired systems are winning great favor, particularly through northern states where farms are snowbound for months.

R. J. Pellow, Erie County, Pa., numbered with progressive and successful turkey breeders, is one of the latest disciples of oilfired heating systems. He reports economy of operation, ease of fuel storage, cleanliness and minimum of maintenance among the attributes.

Much of interest to the oilheating industry can be found in a case history of Pellow's installation. Actually, a discussion of Pellow's brooder heating plant should serve as a stimulus to oilheating men who may have been neglecting this field: Pellow had to practically "engineer" the system himself, after failing to find much helpful advice from oilheating and radiant heat men in the area.

"I consulted with about five plumbing and heating men in this territory," said Pellow, "but they couldn't give me much satisfaction because they didn't seem to have many rules to go by. They could talk about oilfired radiant heat in homes, but turkey brooders were foreign to them. I took the best advice I could find, and devised my own layout, costing about $2400."

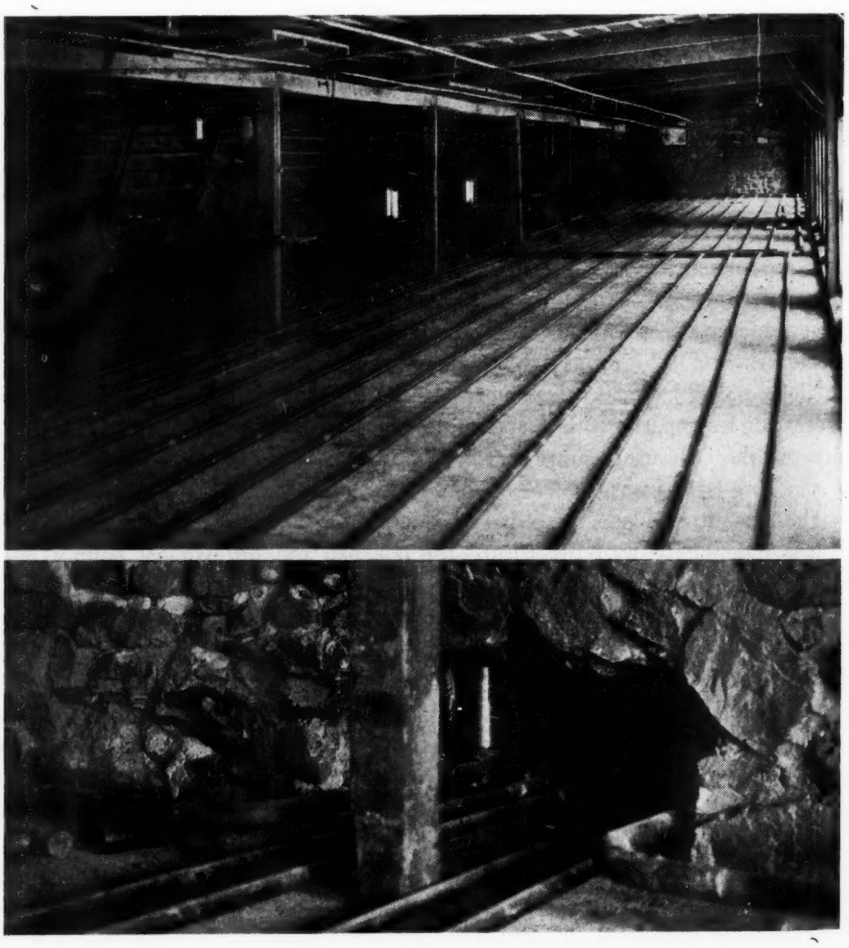
His brooder house measures 32 x 120 feet. Concrete flooring was already down. The roof slopes from 8 to 6½ feet, with windows in the latter elevation and concrete block along the first wall. One end wall is of concrete block and the other, adjacent to the boiler, of old stone.

Pellow and his son, William, made the installation themselves, with the exception of hooking up a MasterKraft oilburner in a Pacific steel boiler and minor adjustments of automatic controls. These were handled by the Erie Stoker and Heating Co., Erie.

"We put in a five-gallon maximum capacity burner," stated J. Deakins, manager of this firm. "Pellow obtained the boiler himself from an installation of a hot water system somewhere in Erie that failed to come off. He also managed to buy his own pipe, and outside of employing a professional welder from North Girard, near his farm, he and his son did all the labor themselves."

About 3400 feet of wrought iron pipe were required for the 3840 square feet of floor space to be heated. Pellow laid the pipe with 15 inch centers in four heating zones, his own idea, and put three inches of concrete over the coils. He used 2 inch feeder lines, each of which runs lengthwise on opposite sides of the brooder house floor to 2 inch headers.

Each quarter heating zone was given a 1¼ inch return line. The remaining pipes used are of the same size. It is a 2600-cubic-feet enclosed system with a 2 inch continuous circulating pump. Pellow conducted tests with thermometers laid at various spots on the completed floor to determine that he would have to keep the boiler at about 140°



Top. *Brooder house, measuring 32' x 120', shown with heating grids installed, ready for concrete to be poured. Boiler is beyond far wall.*

Bottom. *View of hole in old stone wall, on opposite side of which is the oilfired boiler. Feed lines are on the outside edges of the hole and curve around the corner. Four return lines, two on each side of the post, go through opening to individual valves for zone heating control.*

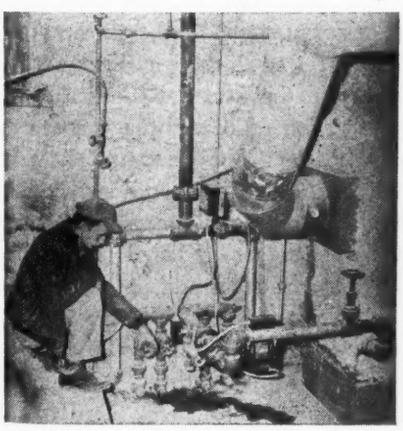
to maintain 110° of heat on the entire floor.

"At the aquastat I installed on the return line to the boiler," explained Pellow, "I register around 120°. But I believe this is necessary, or happens, because the 2 inch pump pulls the water from the system too fast. I'm thinking of switching to a 1½ inch pump to do away with this irregularity."

Pellow had been considering this installation for about four years, and during that time, while traveling hundreds of miles and visiting other turkey farms throughout the country, comparing notes, he decided that the four heating zones would give his installation the most efficiency. Each zone is controlled by an individual valve on its return line, just in front of the boiler.

Thus each zone is controlled according to weather conditions, such as wind direction against the brooder house walls, proximity to windows and so forth, and the age of the poults. For instance, all poults are not started in one season at the same age, but are brought on in groups of hundreds in successive weeks to allow varying dates of maturity for the market. Thus, week-old poults require about 110° underfoot, and then the heat is gradually decreased as the birds become older.

The individual zone valves allow control of the rate of circulation. Pellow circulates the water faster in the zone coils over which he desires more heat, and vice versa. Of course these valves, which permit any zone to be shut down entirely, also provide fuel savings.



William Pellow, *son of R. J. Pellow who installed most of the oilfired heating system, adjusts a quarter-zone control valve in the rear of the boiler. Brooder house is on opposite side of wall.*

Other than the possibility of changing the size of the circulating pump installed, Pellow has had only one deviation from his original layout. This is in regard to fuel storage. Originally he installed two 275-gallon oil storage tanks in the barn along a wall about 25 feet from the boiler, following instructions from his insurance company as to quantity of oil and so forth.

Later, upon more consideration of the weather extremes possible in northwestern Pennsylvania, Pellow decided to revise his storage provisions. Now he is locating a 1000-gallon tank outside the barn and underground. This larger storage provides for the eventuality that roads from the distributor to his farm might be impassable to trucks much of the winter.

Other than the attributes of this type of installation mentioned early in the article, turkey breeders are "sold" on Pellow's oilfired radiant heating system because of the many valuable production helps it affords, meaning more money in their pockets with less risk and work. The "selling" points include the following:

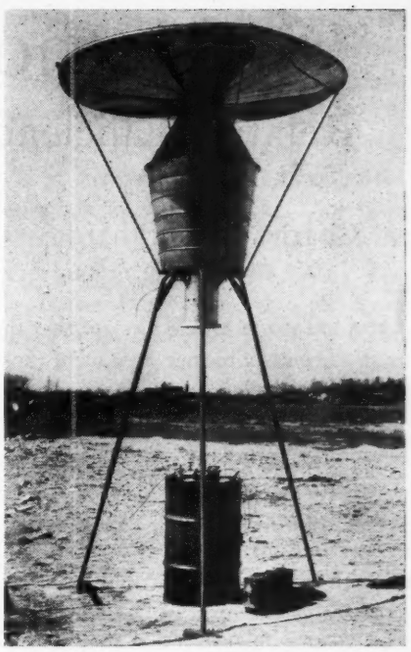
Such systems in even smaller brooder houses are feasible because of the greater ratio of return on the investment. There is less sickness among the poults, which are very susceptible to changes in heat. Evenly regulated heat produces greater resistance to disease. Again, crowding of poults is practically eliminated with radiant heat, thus reducing the number of deaths from suffocation.

Fresh air and cool water, important to a turkey's health, are other important considerations. With this system, you can walk in a brooder house any time it is working and the air temperature six feet over the floor will be about 90 degrees. With that kind of heat, windows can be spotted open here and there to allow better circulation of air.

Poults dislike warm water, just like humans, and so water containers on the floor are insulated against direct heating from contact through the placing of wooden or cardboard pads under the containers.

"During the critical brooding season, when most turkey men seldom get a full night's sleep through worrying about brooder temperatures, I'm pretty comfortable," smiles Pellow. "I've an electric bell in my bedroom that will warn me with a ring if the brooder temperature varies ten degrees, up or down."

Such a system also permits poultry production the year round, chickens or turkeys. It would seem that the oilheating industry needs but little promotion effort to get in on the ground floor of brooder house heating conversions.



An oilburning *frost prevention unit, made by Evans Products Co., Plymouth, Mich. Fueloil is burned under pressure and heat radiated from the metal surface of the heater to the crops within the area protecting them from frost damage. The heater projects infra-red rays directly upon plants heating them from 2 to 8 degrees higher than the surrounding air within the protected area, without heating the air itself. Many units are under test in orchards and vegetable farms in the South and other points.*

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T. B. Clifford, after more than thirty-three years with Standard Oil Co. (Indiana), recently retired on company annuity. For the past twenty-one years he has functioned as manager of the Chicago sales division, to which position he has been succeeded by *R. B. McFarland,* former manager at Huron, S. D. *H. J. Kaufman,* Milwaukee assistant manager succeeds Mr. McFarland and *O. H. Lindmark,* sales promoter in the Chicago office, succeeds Mr. Kaufman.

Methods of Heat Transfer

Relative Efficiencies of Ways That Oil Flames Pass Heat

by
Charles H. Burkhardt*

In a previous article we saw that the most efficient oilburner fires were those with smallest flame volume per gallon of oil and with the highest degree of luminosity, providing the quantity of excess air was controlled. From this we concluded that the smaller and brighter of two fires burning the same amount of oil with the same CO_2 would evaporate more water and must of necessity therefore be more efficient. One of the reasons for this was that the smaller fire would have a more highly concentrated heat release and therefore a higher temperature.

A further reason why smaller, concentrated, highly luminous fires with high CO_2's are more efficient lies in the method with which they transfer a great quantity of their heat to the boiler. This leads us into a discussion of the three ways a flame can transfer its heat to a boiler or furnace and the comparative efficiency of each method. It follows that if one method of heat transfer is more efficient than the other, the flame which employs to the greatest degree the most efficient way of transferring its heat will be the most efficient fire. Oilburner flames vary as to the intensity with which they employ each of the three methods and therefore vary in ability to pass off given quantities of heat to the boiler or furnace with maximum efficiency.

The three methods whereby heat can be transferred are conduction, convection and radiation. These three methods of heat transfer may occur simultaneously as in the case with the oilburner flame and domestic boiler or they may occur individually.

Conduction is the transfer of heat primarily through solid substances. If we heat an iron bar at one end, the entire bar will get hot throughout its complete cubic area as the increased molecular activity spreads throughout the bar. Conduction depends upon the molecular activity of solid or other matter for its process of transferring heat. A good bit of the heat picked up and absorbed by the boiler is due to conduction. The lower sections of the boiler in close proximity to the fire become hot and the heat spreads throughout the mass of metal surfaces of the boiler. The heat is moving through the solid metal sections due to the increased activity of the molecules. In other words, the heat is being conducted throughout the solid metal by molecular vibration—it is heat being passed by conduction.

Heat Transfer Materials

Some materials will pass heat through their surfaces much more quickly and in a greater quantity than others. We say such materials are good heat conductors. For instance, if we had a boiler made of aluminum at 212° F. it would pass 119 Btu's per hour through each squart foot of surface per degree Fahrenheit temperature difference. This is a considerable number of Btu's per degree change. A steel boiler at 212° F. would pass 25.0 Btu's through each square foot of surface per degree Fahrenheit temperature difference. Compare those rates of heat transfer, 25.9 Btu's for steel as against 119 Btu's for aluminum, under the same conditions. The aluminum transfers heat by conduction at a rate over four times greater than steel. This aptly demonstrates that aluminum is an excellent and efficient heat transfer material and is one of the main reasons why it is so much used in cooking utensils.

We can see from this that conduction as a method of heat transfer is the passage of heat primarily through solid matter. The amount of heat transferred by conduction depends upon the plain temperature difference. The transfer of heat by conduction is a relatively inefficient process as we shall see later.

The second method of heat transfer is that of *Convection*. To pass heat by convection we are dependent upon liquids or gases and we group them together under the term "fluids." Convection is the passing or transfer of heat due to currents set in motion by the application of heat. This application of heat causes a change in density and makes that part of the fluid which is receiving the heat lighter in weight. This occurs in two ways in a domestic boiler. First, the oilburner flame gives off a great volume of gases and these being heated are lighter. Thus they rise through the boiler and give up a good portion of their heat to the boiler surfaces. The gases by *convection* transfer heat to the upper part of the boiler and coming in actual contact with the boiler surfaces pass their heat by *conduction* through the boiler. The water on the other side being heated rises to the top of the boiler and the cooler water descends. Thus convection currents pass the heat throughout the water. Heat moves through all fluids by convection, which is nothing but the currents being set up by the heated lighter fluid rising and the cooler and heavier fluid descending.

Convection also is a relatively inefficient method of heat transfer and depends upon the plain temperature difference for any increase in its rate.

Flame Radiation Best

The third method (and this is the real efficient method) whereby heat may be transferred to the boiler is by *radiation* from the flames. Radiation is the transmission of heat through space by wave motion. The passage of heat by radiation does not depend on any matter, solid or liquid or gaseous. Heat waves that are radiated will move through a vacuum and do not depend upon the temperature of surrounding air or matter. The heat of the sun is passed on to the earth by radiation. In the winter if the face is lifted to the sun it will feel warm even though the surrounding air is at zero, demonstrating that heat can be passed by these waves regardless of the temperature of local media. In a room heated by radiant

*Department of Heating and Air Conditioning Engineering, Walter Hervey Junior College, New York City.

panels the air can be kept at relatively lower temperatures because the radiant wall, ceiling or floor panels are radiating their heat waves to the body and the sensation of comfort is experienced regardless of the lowered air temperature.

Oilburner fires pass off a good proportion of their heat by these waves (radiation) which travel at the speed of light, 186,000 miles per second. In fact, we are finding out now that 30% or even more of the total heat of a luminous flame can be passed on by radiation, much more than we heretofore expected. The transfer of heat from the flame to the boiler by radiation is the most highly efficient of the three methods and, therefore, the best practical way.

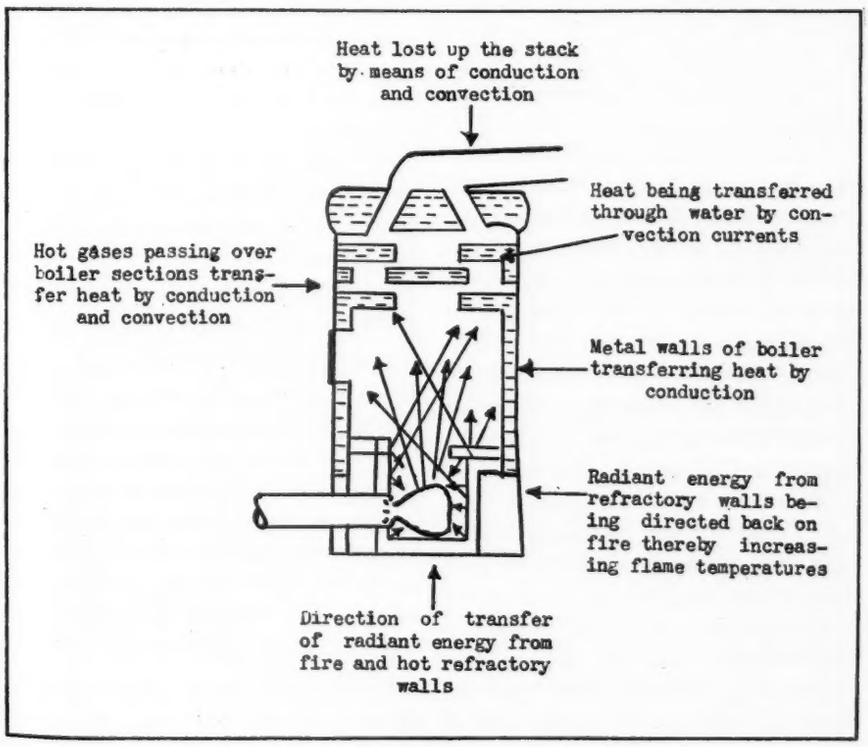
Notice that in the case of heat transfer by conduction and convection, they are in proportion to the plain temperature (absolute) difference. Suppose the temperature of the hot gases going through the boiler were 110° F. and the boiler surface was 100° F., the rate of the heat transfer by convection and conduction in this case would be in proportion to the difference between the two or 10°. If the difference had been 20° the proportion of heat transfer would be in comparison to 20°, twice that of the 10° rate.

With radiation, this is stepped up considerably for the proportionate rate to which the heat is transferred is tremendously higher. To find that proportion we would have to take the difference of the two (absolute) temperatures (110° F. and 100° F.) after *each had been multipled by itself four times.* Thus the proportion comparative to the rate of heat transfer by radiation would be equal to anywhere from a minimum of sixteen to four hundred times the rate of transfer attained with conduction and convection.

Thus we can see that the more heat that will be transferred by radiation from a flame to a boiler, the more efficient the heating system will be. The *rate* with which heat can be passed by radiation with oil fires depends upon two things. The flame temperature and its luminosity. We saw from the previous articles smaller fires for a given quantity of oil have higher flame temperatures because of their more concentrated heat release. Small, compact, definitely shaped fires are, therefore, important because of this efficient high temperature heat release.

In radiant fires, we can calculate the number of heat waves given off per inch and the more heat waves radiated per inch, the better because this means the boiler surfaces are receiving more heat. The number of waves of radiant energy given off per inch is determined *by the color of the waves* which in turn are evidenced by the color of the fire (incandescent carbon particles). As the color of a fire goes from dull red to white, the frequency of the waves of radiant energy increases, as well as the number of waves per inch.

For example in a *red, dull* fire, the temperature will be about 1,300° F. and the concentration of the number of waves of radiant energy will be about 39,000 to the inch, and the vibrations of the particles of heated carbon in the flame become so frequent that 450,000,000,000,000 waves are transmitted per second and the color sensation that is red to the eye results. With an *orange* fire, the temperature will be about 2,000° F. and the concentration of the number of waves of radiant energy will be about 43.000 to the inch and the frequency of the wave cycles per second that are transmitted is about 500,000,000,000,000; this causes the color sensation of orange within the fire. With a *yellow* fire, the temperature will be about 2,200 ° F. and the concentration of the number of waves of radiant energy will be about 46,000 to the inch, with 560,000,000,000,000 waves transmitted per second because of the molecular vibrations of the incandescent carbon. This causes the yellow color.


Heat lost up the stack by means of conduction and convection
Heat being transferred through water by convection currents
Hot gases passing over boiler sections transfer heat by conduction and convection
Metal walls of boiler transferring heat by conduction
Radiant energy from refractory walls being directed back on fire thereby increasing flame temperatures
Direction of transfer of radiant energy from fire and hot refractory walls

Flame Color Effect

We can see now that the lighter the flame in color, the greater the frequency and concentration of radiant energy will be transferred to the boiler surface. Thus the flame temperature and the luminosity both are direct indications of the amount of radiant energy being put forth by the flame. In fact, with distillate oil fires, this depends strictly and directly on the temperature of the flame and its luminosity.

This brings us back to the question of CO_2 readings for they now assume a greater importance than we hitherto expected. The main purpose of the CO_2 reading is to give us a strict measurement of the amount of excess air so that we may have a measure of control over the medium (excess air) that is taking our heat up the stack and raising our stack temperatures. Excess air now concerns us for it takes away heat from our flame, thus lowering the flame temperature and *thereby reducing directly the amount of heat transferred as*

radiant energy (by radiation) the most efficient means of heat transfer and substitutes for it heat transfer by convection and conduction, relatively inefficient means. Thus excess air is not only a thief of our sensible heat, as shown by a rise in stack temperature, but is a substitution of inefficient means of heat transfer as regards the rate, for a highly efficient one. The closer we can get to burning a given gallon of oil with the exact theoretical amount of air necessary, the greater will be the amount of heat given to the boiler as radiant energy and the less by conduction and convection.

Thus all the contributing factors towards true combustion efficiency (proper environment; exact oil-air ratio; proper draft; thorough atomization) are but basic contributions that are of value only if they result in comparatively small concentrated, highly luminous, high temperature fires, needing relatively small amounts of excess air. These types of fires will pass the maximum available amount of their heat that can be transferred as radiant energy, resulting in more water evpaorated per pound of oil consumed, the only absolute index of true operating efficiencies.

Combination Oil-Gas Burners Detrimental to Oilheating

DURING RECENT WEEKS there have appeared on the market a number of combination gas and oilburners for domestic use. These were not widely noticed until some of the Midwest gas utilities started liking them in a big way. Present plans call for the installation of quite a few hundred of these burners for use in the coming season in the Kansas-Missouri-Iowa regions.

The theory behind the combination burner is that it will be fired with gas until such time as the outdoor temperature drops below a set point (probably twenty-five degrees), and then fired with oil during periods of lower temperatures. This means, of course, that oil would be used during the season of peak demands so that from the standpoint of the fueloil man, it would be adding another peak on top of an existing one.

The arrangement would be ideal for a natural gas utility, since it could handle far more home heating jobs were it not for the fact that pressures get too low in cold weather. The gas utility would have great flexibility in exactly fitting its own individual picture by changing the upset temperature point on the burner to as low as ten degrees or perhaps as high as thirty-five degrees, or at any point in between.

On first study, there seems nothing in this whole project that could be helpful to oilheating men. Certainly there is no need at the moment to find additional outlets for distillate fuels, particularly the No. 1 variety that would be required in the type of combination burner now being promoted in the area described.

A division office of one of the principal major oil companies became interested in the project to the point of sending the full story to its company's head office. The paragraphs that follow contain the findings or opinions of the individuals in the head office who were asked to look into the matter.

1. The oilheat market is far from saturated. Only then would oil companies be justified in combining with gas to tap additional potential. Any additional oil supplies available over last year's demand should be directed into 100% oil installations in order to protect oilheat's future market position.

2. The O.H.I. program calls for 350,000 new central heating plant installations. Considerable time and effort have been spent to set this program up. So far this program is lagging. No doubt this is due to the lack of assurance from the oil industry as a whole that enough new oil supplies will be available to cover this new requirement. To even partially divert oil supplies into the combination gas/oil unit market would be inconsistent with O.H.I. program.

3. To let the gas companies supply these users during the slack or easy part of the winter and shift the burdensome job of supplying oilheat during the peak winter months speaks well for gas company strategy. Oil companies, however, would be foolish to fall for that kind of a deal, since it would accentuate their delivery problems during the bad weather months without any benefit of easier deliveries during the rest of the season when truck time is more plentiful. It is said that these units would require only one summer-fill delivery of about 260 gallons. If this is two-ninths of the season's heat load, then the whole requirement is about 1200 gallons. Moreover, December, January and February account for 50% plus of the heating season demand. Therefore, midwinter deliveries of fueloil would be required. As to the summer-fill feature, oil has that opportunity with regular 100% accounts. Hence, the combination gas/oil program offers nothing new in that respect. (Our informant insists that only one summer-fill delivery will be required all season and that two-ninths or 22% of the total season consumption estimate is based on the normal total season hourly weather data for temperatures below 27° F. In our opinion, this is subject to further check.)

4. This enables gas companies to get into more homes not otherwise possible. Therefore, would enable them to get greater share of potential now for future exploitation for 100% gas connections. For instance, it would be easy for them to show these consumers a plausible comparative fuel cost picture, since oil would be used during the heavy consuming months. Therefore, on a monthly basis it could possibly be shown that oil costs more than gas, particularly since oil prices are now about at their peak and gas rates have not, as yet, been raised everywhere, even though a number of applications for increases are pending. In fact, they might easily even be able to appease the customer on the justification for higher gas rates by the oil/gas comparison, thereby taking the sting out of increased gas tariffs.

5. It is purposed to burn as cheap an oil as possible. The unit can operate reasonably satisfactorily on No. 1, but if heavier grades were used to keep operating costs down and trouble from carbon, smoke, etc., results, this would make a splendid sales story for the gas companies when they bear down to convert the user to 100% gas, which they will undoubtedly do later on.

6. Even if oil would operate all right, the unit is projected to use a permanent

gas pilot—hence, gas would have a foothold and they won't overlook that contact when they want these heat users 100%.

7. The advertising pamphlet on this unit mentions that whatever carbon or soot results from oil operations can be cleaned up by operating on gas when switched to that fuel. A fine future story for 100% gas solicitation.

8. To operate satisfactorily on oil, a No. 1 grade is required. This then merely builds up more demand for that product which is already a problem.

9. This conventional pot-type unit was primarily designed to burn oil and unless operated on No. 1 will not do that job very well. Imagine what kind of a reputation oilheat will get when gas is introduced into this operation. In effect, it will provide a small laboratory in the consumer's basement for a study of gas versus oil; with the latter at a disadvantage under poor, lower quality, lower priced oil operating conditions. Whereas, higher priced, higher quality oil operation means a likely greater than gas fuel bill for the customer. Either way, oil loses out.

10. Suppose this program is successful. In those localities where only manufactured gas is available, any new potential developed would not only require additional oil for direct consumer use but also additional oil for the utilities to make the increased gas supply needed as well. Hence, a double load for oil with gas getting a strong consumer boost.

O.H.I. Survey of Tank Mfrs. Finds Mild Shortage for Year

On JULY 1ST, OHI sent to 339 recorded Tank Manufacturers, a questionnaire designed to develop information on rate of production in 1948 as compared to 1947; the number and sizes of tanks unsold and in stock as of June 30th, and the regional location of these tanks.

116 of the manufacturers (35%) replied. Of these 116 there were 78 (67%) who reported no unsold tanks of any size on hand as of June 30.

The remaining 38 (33%) reported 21,044 tanks on hand and unsold as of June 30.

Regionally, the 21,044 tanks were located as shown in the table.

Presumption — The tank producers who did not reply probably had in stock on June 30 sufficient unsold tanks to no more than double the 21,044 reported.

The 116 respondents next answered the question: What percentage of your 1947 production of oil storage tanks do you expect to attain this year?, as follows:

50% or Less	19
51-75%	13
76-99%	8
100%	21
101-150%	6
Over 150%	4
Discontinued Product	7
No Estimate Given	38
	116

Almost without exception the reason given for not estimating production was uncertainty over steel supply. Inability to get steel was the reason advanced by those who have discontinued production of fuel oil storage tanks.

Almost a third of the 116 respondents indicated that their production was sold out for the balance of the year.

Those who anticipate having uncommitted production, listed and checked regionally, result in the following figures:

Location of Tanks

	TANK SIZES							Total All Sizes	% Tanks to Total	% Burners Installed to Whole Country*
	220	275	550	675	1000	1500	2000			
N. England	57	7,973	526	..	821	..	1004	10,381	49.1%	19%
Mid-Atlantic	170	2,782	49	..	538	1	2	3,542	16.8%	42%
So. Atlantic	..	40	..	..	..	..	..	40	..	3%
Midwest	1055	1,000	..	2	17	..	7	2,081	10.0%	22%
So. Central	..	1,000	500	..	2000	5	300	3,805	18.2%	2%
Mt. States	..	150	..	..	..	..	..	150	.8%	1%
West Coast	100	225	..	130	125	110	10	700	3.4%	11%
Canada	125	205	15	..	..	..	..	345	1.7%	..
Totals	1507	13,375	1090	132	3501	116	1323	21,044	100%	100%

*The 3,700,568 burners in use March 31, 1948 were, percentage-wise, in the regions as shown. In the first quarter of 1948 the installation pattern differed, i.e.: NE 19.6%; MA 26.8%; SA 8.8%; MW 30%; SC 2.4%; MS 1.3%; WC 11%. Tank stocks are regionally out of balance with present, and probable future, demand.

Tanks Yet To Sell

	TANK SIZES							Total All Sizes
	220	275	550	675	1,000	1500	2000	
New England	400	33,700	1600	..	2,650	..	3100	41,450
Mid-Atlantic	150	30,400	800	..	1,600	105	240	33,295
So. Atlantic	..	2,000	600	..	400	100	200	3,300
Midwest	11,075	53,250	3405	1610	3,907	385	735	74,367
So. Central	..	2,200	1500	..	2,000	..	1200	6,900
Mt. States	..	1,000	250	..	200	..	200	1,650
West Coast	220	575	260	255	360	230	120	2,020
Canada	1,025	4,003	15	...	...	..	..	5,043
Totals	12,870	127,128	8430	1865	11,117	820	5795	168,025

The reports show a higher percentage of Midwest producers will have uncommitted production than producers in other areas. They are either actually in better shape for steel or are more optimistic than other folks.

Presumption — The tank producers who did not reply would probably do no better than to double the estimated 168,015 uncommitted production.

The oil burner industry is working on a moderate sales program of 350,000 new power burner users in 1948. Space heater sales are expected to be 650,000 and about a third of these will require a tank. Tank replacements will probably amount to not less than 26,000 for the year. Additional storage to that in use, by homeowners and others, is estimated to require 100,000 tanks in 1948. Total tank requirements, in all sizes for the year, estimated 676,000 for oil burner industry and that allows nothing for the improvement of a presently low inventory position in the field.

Edit. Note: The study indicates a moderately tight tank supply developing before the fall season is past. Dealers would be well advised to keep a fair surplus on hand, but not to load up heavily since if all dealers should do that we could again expect a revival of too high prices.

Get These Salesmen's Kits To Convince Prospects on Oil

TO PROVIDE "FRONT DOOR" proof of increasing oil supplies to the wary homeowners still suffering from the results of last winter's unfavorable oil publicity, the Oil-Heat Institute of America has prepared a special folder for use by oil burner salesmen containing reprints of recent optimistic oil industry advertisements.

The new green and black O. H. I. Folder, entitled "Oil for America," brings together for the first time a salesman's presentation containing a strongly optimistic and authoritative picture of the fuel oil situation. The 10 x 14 inch folder contains a small pocket to hold six reprints of the advertisements currently appearing in leading national magazines under sponsorship of the Oil Industry Information Committee. Additional space in the pocket is provided for extra reprints or other forthcoming "fuel situation" materials.

The new folder will become a powerful "sales clincher" for oil burner salesmen faced with a hangfire sale characterized by the now well-known statement, "But, we can't be sure we'll get any oil."

In such cases, the salesman can present the "Oil for America" folder, the cover of which displays the statement, ". . . to the Oil Heat Purchaser these factual statements correct misapprehension regarding Fuel Oil Supply."

The O.H.I. feels that the actual visible proof of optimistic oil industry statements in the salesman's hand plus his own reassurances are bound to result in a far more favorable and pointed reaction in the statements in a magazine advertisement.

In sharp contrast to earlier oil industry statements, which took what was considered to be a negative line, the latest advertisements incorporated in the folder stress the herculean efforts of the oil industry to provide more and yet more oil for home use. Important statements referring to fuel oil supply are underlined in red to draw quick reader attention.

The advertisements lead off with the line "How 34,000 oil companies serve the nation . . . ," following with detailed information on how oil production, transportation, refining and delivery records are being broken again and again to supply current demand.

One of the advertisements concerns itself exclusively with oil burners and points out in its copy, "The oil industry will continue to do everything possible to see that you get all the oil products you want—when and where you want them."

The reason for using oil producers' statements rather than those of the O.H.I. itself was explained by L. A. Casler, president of Casler, Hempstead & Hanford, Inc., Public Relations Counsel for the O.H.I. "Since the real authority on oil supply resides with the oil refiners and not with ourselves, we felt that the actual advertisements now being run by the oil people would far more effectively serve the cause of reassuring homeowners than would any statements, however factual, turned out by the oil heat industry whom homeowners might feel had an "axe to grind."

The folders, including reprints, are available to oil heat manufacturers for the use of their dealers, or to dealers directly, at a price of twenty-five cents per folder plus postage and packing, from the Oil-Heat Institute of America, 6 East 39th Street, New York, N. Y.

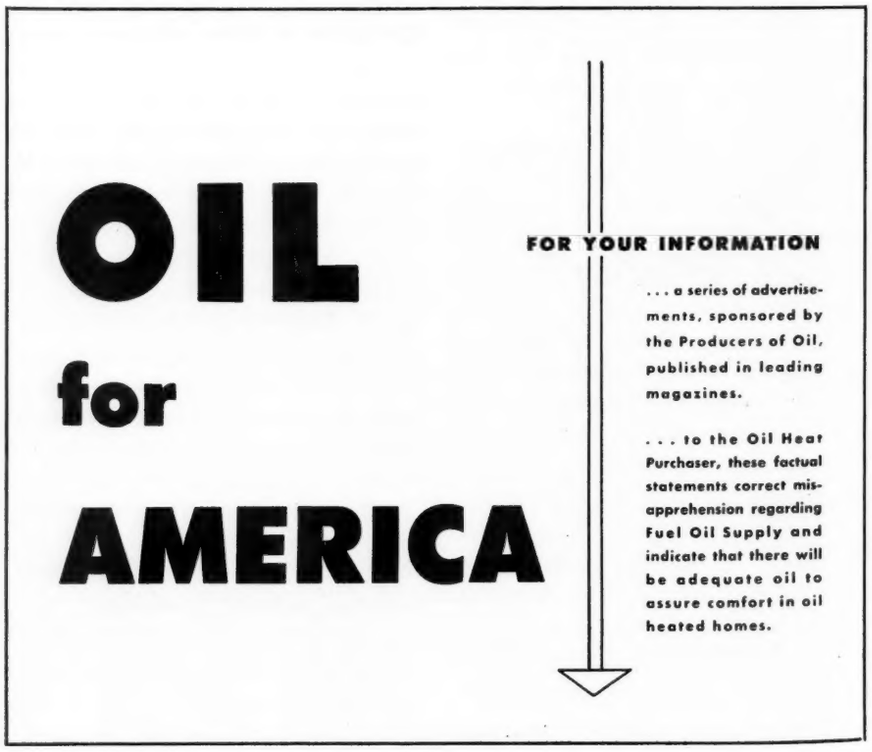
Also available are 18½ x 24½ inch blow-ups of the same six advertisements for use in dealers' windows or showrooms, at a cost of ten cents per blow-up plus packing and postage.

Both the folders and the blow-ups are part of the O.H.I.'s accelerating public relations campaign to get news of the favorable oil supply outlook for the 1948-49 heating season across to present and prospective oil heat users.

. . . . . .

Below *is an illustration of the lettering on the cover of the folder to be carried by salesmen to convince doubting prospects that the oil industry is interested in additional oilheating business and is making every possible effort to increase the output of this fuel.*

Page opposite *shows parts of seven oil industry advertisements designed to show the public that the industry is breaking all records to meet its requirements, showing how oil in many ways brings higher living standards to Americans. Each of the ads mentions fueloil or oilheating—four of them illustrate oilheating applications. One ad, to appear in September, and of which the art work is shown at the center of the page, has oilheating as its feature theme.*


OIL
for
AMERICA
FOR YOUR INFORMATION
. . . a series of advertisements, sponsored by the Producers of Oil, published in leading magazines.
. . . to the Oil Heat Purchaser, these factual statements correct misapprehension regarding Fuel Oil Supply and indicate that there will be adequate oil to assure comfort in oil heated homes.

1,333,000 NEW TRACTORS ON FAR
Oil Industry Breaks All Records
Supply Biggest Demand in History
. . . tops wartime record
HOW 34,000 OIL COMPANIES
SERVE THE NATION AS
OIL BREAKS ALL
TRANSPORTATION RE
OVER 200 MILLION GALLONS
DELIVERED EVERY DAY TO YOU
HOW 34,000 OIL COMPANIES SERVE THE NATION...
THE BIGGEST JOB THIS JOBBER EVER D
Keeping Your Community Supplied with Oil
OIL INDUSTRY INFORMATION COMMITT
420 fifth Avenue, New York 19, N. Y.
HONIE-HEAT OIL COMPANY
WORKING
NIGHT AND
reaks
uction
Records Again
Oil Industry
Breaks All Records
to Supply
Biggest Demand
. tops wartime record
OIL INDUSTRY INFORMATION COMMITTEE
OIL INDUSTRY INFORMATION CO
420 Fifth Avenue, New York 19, N. Y.

First Half Petroleum Supply 12% Above 1947

DURING the first six months of 1948 the petroleum industry made available for domestic consumption 12% more total oil products than in the first half of 1947, according to American Petroleum Institute. The increase was brought about through a ten percent rise in domestic crude production, a 20% drop in exports, a 5% rise in imports, and a 13% gain in refinery operations. Total demand for all petroleum products in the same period raised 9% over 1947, thus permitting a substantial gain in the stock position of all finished products.

Among individual items gasoline demand on the first-half of the year was up 10%, kerosene and range oils up 13%, and distillate fuels up 20%.

The oil industry deserves unstinted praise for the magnificent performance that led to the 12% rise in product availability; after the industry's economists through the Spring months had been predicting that 7 or 8 percent would be the absolute top increase, and some important forecasts given wide publicity used the figure of 5 percent.

The Bureau of Mines also recognized the improved position of the industry by issuing on June 30 its revised forecast for supply and demand in 1948. It now believes that gasoline demand for the full year will be up 10% above 1947; kerosene and range oil up 14.2%; distillate fueloil up 19.3%; residual fueloil up 1.7%.

The improved supply outlook for distillate fuels has almost eliminated high premium payments for spot purchases on the Atlantic Seaboard. According to the *N. Y. Journal of Commerce*, barge lots in New York Harbor have been moving to spot buyers at 10.5¢, or less than a cent above posted prices.

◈

New Burner Service School Operating In Newark, N. J.

SINCE MARCH 1 of this year the Lincoln Technical Institute, 256 Washington St., Newark 2, N. J., has been conducting a course in domestic oilburners installation and servicing. The course is 440 hours in length and can be completed in 4 months in day sessions or in 6 months in night classes. It is under the direction of Andrew W. Ferguson, who was formerly associated with Northern Air Conditioning Co. of Newark. The course is approved by the State Department of Education for veteran training.

◈

Brewster Jennings Heads Petroleum Emergency Body

WALTER S. HALLANAN, Chairman of the National Petroleum Council, announced July 12 the appointment of a Committee on National Petroleum Emergency to study, report and make recommendations to the Council with respect to the nature of Government, Government-Industry and Industry organizations, procedures and policies that would best meet the needs of another national emergency should one arise.

Appointment of the Committee was authorized by the National Petroleum Council in response to a request by the Director of the Oil and Gas Division of the Department of Interior. In a letter to the Chairman of the Council he said:

"In view of the central importance of petroleum to the national security and welfare, the Government and the petroleum industry should be prepared to reinstitute immediately when and if necessary, such measures as may be determined to be necessary to safeguard and assure supplies for essential needs in times of emergency and to provide the best possible Government and industry set-up to function at such time.

"Solely in the interests of preparedness in this vital segment of the Nation's economy, and with the hope and expectation that the results of the study will never be needed, the Department believes that the National Petroleum Council would perform a most valuable public service if it should survey the petroleum experience of the recent war and the pattern that emerged during the period 1941-1945, and would recommend such Government, Government-Industry, and Industry organizations, procedures, and policies as in its opinion would best meet the needs of another emergency should one arise."

The membership of the National Petroleum Emergency Committee is as follows: Chairman, B. Brewster Jennings, Socony-Vacuum Oil Company, Inc., New York; Vice Chairman, J. R. Parten, Woodley Petroleum Company, Houston; Bruce K. Brown, Standard Oil Company (Indiana), Chicago; H. S. M. Burns, Shell Oil Company, Inc., New York; J. C. Donnell, II, The Ohio Oil Company, Findlay, Ohio; B. I. Graves, Tide Water Associated Oil Company, New York; D. A. Hulcy, Lone Star Gas Company, Dallas; J. A. Lentz, Continental Oil Company, Denver; B. L. Majewski, Deep Rock Oil Corporation, Chicago; J. Howard Marshall, Ashland Oil & Refining Company, Ashland, Kentucky; Glenn E. Nielson, Husky Refining Company, Cody, Wyoming; John W. Newton, Magnolia Petroleum Company, Beaumont, Texas; S. F. Niness, National Tank Truck Carriers, Inc., Downingtown, Pennsylvania; H. J. Porter, Texas Independent Producers and Royalty Owners Association, Houston; Claude P. Parsons, Spartan Tool Company, Houston; E. E. Pyles, Jergins Oil Company, Long Beach, California; W. R. Reitz, Quaker State Oil Refining Corporation, Oil City, Pennsylvania; W. S. S. Rodgers, The Texas Company, New York; Stribling Snodgras, Bechtel Corporation, San Francisco; Reese H. Taylor, Union Oil Company of California, Los Angeles; and, W. W. Vandeveer, Allied Oil Company, Inc., Cleveland.

◈

Extend Gas Heat Ban A Year In New York

NORTHERN NEW YORK cities, where gas lines are presently overloaded, will not get additional gas heating for another year. The state Public Service Commission has extended the restriction on the sale of natural and mixed gas for heating in New York State until May 1, 1949.

Testifying before the Commission recently, John T. Kimball, vice-president and director of Central New York Power Corporation and New York Power and Light Corporation, said there was no shortage of gas in the fields, but it would take years to get and install sufficient facilities to transport enough gas to meet the demand. Hearings were held at the request of the Syracuse Housing Authority and others seeking to lift the ban on gas heating.

"I don't think in the foreseeable future it will be possible for the distribut-

ing companies to go ahead without restrictions of some sort," Mr. Kimball told the Commission. "And if we should experience this coming winter the severe weather we had last year, there no doubt will be great shortages of gas in New York State this coming winter. There are going to be restrictions of some kind or other for many years to come."

◈

3-Way Valve Requirement Eliminated by Underwriters

A. E. HESS of the Oil Heat Institute on July 21 announced that definite confirmation of the elimination of the three-way valve requirement of the present oilburner standards, Pamphlet No. 31, of the National Board of Fire Underwriters is contained in their Bulletin No. 268 issued May 28, 1948. The paragraph reads as follows:

"Following similar action by the National Fire Protection Assn. at its recent convention in Washington, D. C., the National Board of Fire Underwriters hereby announces the removal from Sec. 5(b) of its Oil Burner Standards, Pamphlet No. 31, of the requirement for the approved interconnecting three-way valve between gravity tanks."

Dealers may now install two 275-gallon tanks and connect them so that they function as a single 550 gallon storage. Where some cities may still have ordinances prohibiting this, they can probably be set aside if this change in Underwriters' attitude is shown them.

◈

Texas Eastern Asks Enlarged Gas Facilities

TEXAS EASTERN Transmission Corporation, owner and operator of the Big and the Little Big Inch pipe lines, has applied to the Federal Power Commission for authority to perform construction which would increase its deliveries of natural gas to consumers in the East by 235 million cubic feet daily and bring the total sales capacity of its pipe line system to 740 million cubic feet per day.

The increase in deliveries would be brought about as a cooperative effort with Texas Gas Transmission Corporation.

Texas Eastern stated in its application that it proposes to sell up to 200 million cubic feet of gas daily to Texas Gas at Lisbon, Louisiana for transportation to Middletown, Ohio, through a line which Texas Gas recently requested FPC approval to construct. Texas Gas would then deliver up to 235 million cubic feet daily to Texas Eastern at Middletown, 210 million of which would be redelivered to The East Ohio Gas Company and subsidiaries of the Columbia Gas System. The remaining 25 million cubic feet per day would be for the general system usage of Texas Eastern.

◈

Allied Oil of Cleveland Becomes Part of Ashland

ALLIED OIL CO., Cleveland, one of the country's largest fueloil marketers, with its own production, refining and transportation subsidiaries, has merged with Ashland Oil & Refining Co., Ashland, Kentucky, on a stock exchange basis. All stock of Allied Oil has been exchanged for approximately one-fifth of Ashland's stock, most of which goes to W. W. Vandeveer and F. R. Newman, who originally organized Allied and remained its principal owners.

Combined sales of Allied and Ashland are approximately $100 million a year and profits $10 million. With the acquisition of Allied, the Ashland Co. gains much needed additional crude oil availability, some additional refining capacity bringing the total to just under 50,000 barrels daily, and makes an impressive entry into the fueloil market, which it had formerly given little attention. J. Howard Marshall is president and Paul Blazer board chairman of Ashland.

◈

Better Oilheating Publicity In Magazines

NOW THAT THE fueloil supply outlook for next season is improved to the point of appearing adequate, several consumer magazines are running stories this summer on various phases of the subject. For example, "House Beautiful" is having two such articles, one in its July and one in its August issue, "Science Illustrated" is also running two articles, including one that appeared in its February number last winter. That February article was a very interesting discussion of the part played by combustion testing instruments in checking fuel efficiency. Among other points it emphasized that a one-sixteenth inch coating of soot may cause a fuel waste as high as twenty-five percent. It also emphasizes the point that stack temperatures should not be over five hundred degrees.

The first of the "House Beautiful" articles is also on fuel efficiencies to be realized through the use of combustion testing instruments. In both this and the "Science Illustrated" story, the illustrations used were of instruments made by Bacharach of Pittsburgh.

Other magazine articles of this summer on oilheating will appear in "Fortune" and in "Colliers." In general, all of the articles mentioned are on the constructive side in contrast to the generally destructive type of publicity so prevalent last winter.

◈

U. S. Department of Labor Fueloil Prices May

FIELD INVESTIGATORS for the Department of Labor monthly check prices of principal fuels in several cities in each section of the country. Getting retail quotations from various suppliers in each market, the prices are averaged and published. Those in the table that follow were taken May 15 (cents per gallon):

	Range	*No. 1*	*No. 2*	*No. 3*
Boston	14.13	14.00	12.18	..
Manchester	14.77	14.10	12.54	..
Portland, Me.	13.44	13.48	11.54	..
***Buffalo	15.55	..	13.84	13.84
**New York	..	..	12.70	..
Philadelphia	..	13.50	12.00	..
**Chicago	15.50	14.88	13.57	14.06
***Detroit	..	15.12	14.45	13.18
Milwaukee	..	15.76	14.10	14.15
*Kansas City	..	13.32	12.68	12.89
Minneapolis	..	14.83	14.12	14.13
**Baltimore	..	13.08	11.73	..
Wash., D. C.	..	13.60	12.50	..
Jacksonville	..	14.83	13.48	..
Norfolk	..	13.40	11.40	11.40
Richmond	..	13.00	11.11	..
Savannah	..	16.62	14.67	..
***New Orleans	..	14.39	12.51	12.43
Portland, Ore.	..	13.10	10.80	6.90
***San Francisco	..	12.94	10.71	6.62
***Seattle	..	13.66	11.50	7.11

*Price includes 1% sales tax.
**Price includes 2% sales tax.
***Price includes 3% sales tax.

Industry Escapes Brunt Of Portland, Ore. Flood

MORE FORTUNATE than most during the Portland, Ore. flood the early part of June were the oil and burner dealers located along the main waterfront areas. Bill Alexander of Oregon Heating Industries, Portland chapter of Oil-Heat Institute, gave a report in early June of the effect the flood had had on the group's members as of that time. He says, in part:

"I can understand your concern when you heard about 18,000 people losing their homes in Vanport, which was a Government Housing Project. This was heated with coal stokers. The flood damage is along the river and very few homes outside of Vanport have been damaged.

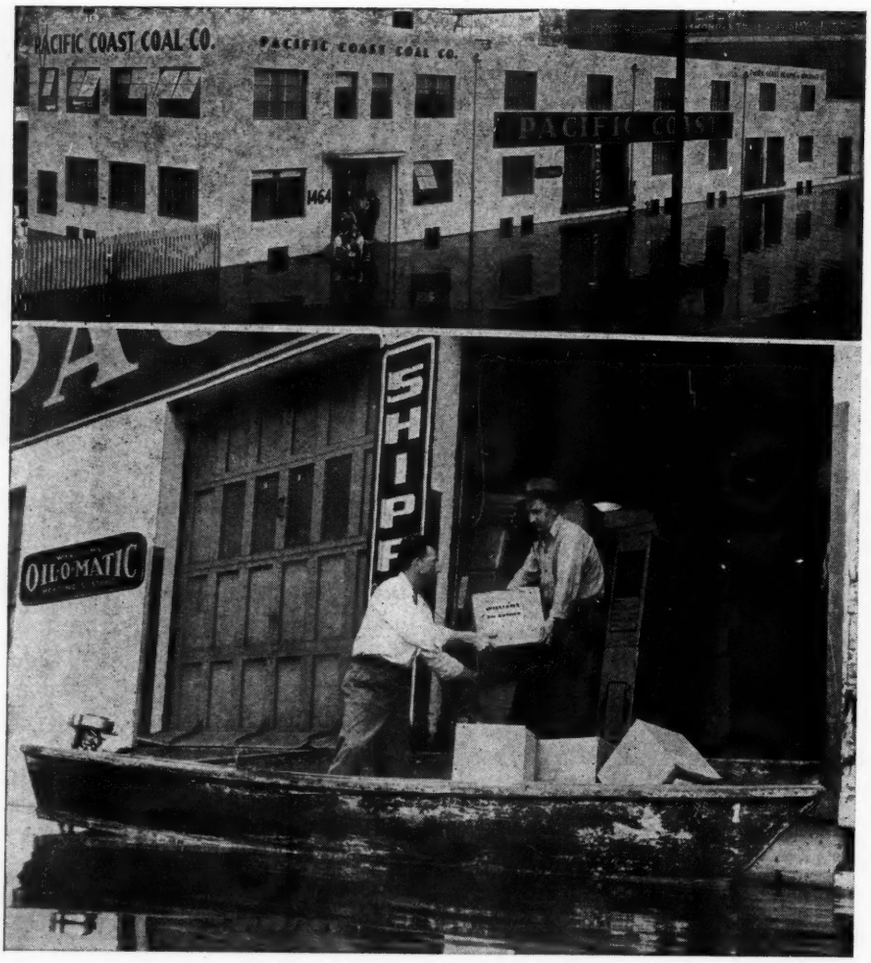
"As the river kept rising for a period of ten days to two weeks, all burners and motors were removed from the flood area.

"I have not had an opportunity to make a thorough check yet, but the only damage to our members here in Portland is as follows:

"Liberty Fuel and Ice, coal yard has a small amount of water. Pacific Coast Coal Company, with whom is associated the Pacific Coast Heating Appliance, are under water, but they have moved most of their merchandise so that it is safe. Pacific Coast Coal yard is under water. Ther Acme Fuel Company, who are down near the Columbia Slough, have two or three thousand cords of wood and only about forty cords of this is under water, which they will be able to salvage when the water goes down. The Miesen Fuel Company had a couple thousand cords of wood stored in a spot near the Acme Fuel Company, which is a loss. This to my knowledge at the moment is the only damage to our members and from the over all picture you can see that we are extremely fortunate in our industry.

"A number of warehouses and buildings for two or three blocks are under water on the East side of the river, but on the West side it is only in basements and, as stated above, as far as our industry is concerned, the equipment has been moved."

The accompanying pictures illustrate strikingly how the water level of the Willamette River at Portland finally stopped rising just short of truck platform height along the waterfront streets. Many establishments in the area were forced to suspend operations, but Pacific Coast Heating and Appliance Company was able to fill most of its orders by use of rowboats, especially to rush Oil-O-Matic burners to some of the dealers installing under time-limit contracts.



Pacific Coast *Heating and Appliance Co., Williams Oil-O-Matic outlet in Portland, Ore., operated under difficulties during the June flood of the Willamette River. The top view shows how the river stopped rising just short of truck platform height and illustrates how employees commuted the last leg of their trip to the office by rowboat. In the close-up of the shipping platform, the outboard-powered rowboat is being loaded with an emergency shipment of burners.*

◈

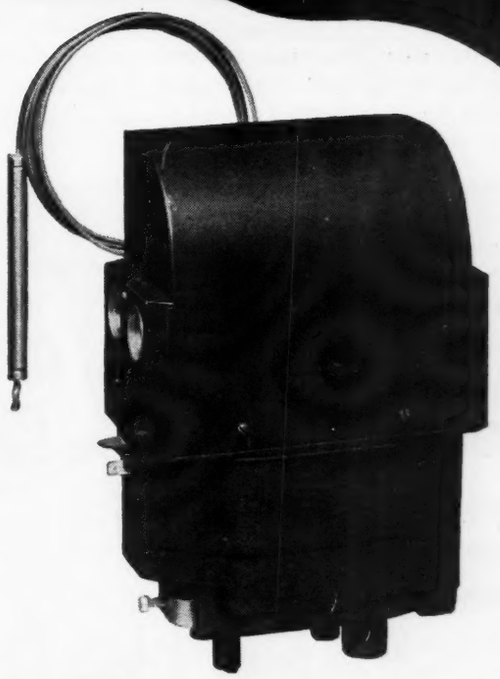
Miss Ethel W. Hurst, following her re-election as vice president, assistant treasurer and director, Petrol Terminal Corp., Philadelphia, was presented with a silver service set at a meeting held June 24 in the Belvedere Hotel, Baltimore. The occasion marked her tenth anniversary as an officer and director of the company, of which she is one of the founders. Other officers re-elected were *E. M. Callis,* president; *F. F. Sweeton,* vice president and director in charge of transportation and crude oil purchasing; *V. E. Smith,* vice president in charge of manufacturing at Texas City, Texas; *C. W. Whitney,* vice president and director in charge of sales; *J. A. Spahn,* secretary.

J. S. Morse has been transferred to the New York office of Shell Oil Co. as plant manager. *C. P. Woodward* succeeds him as operations manager of the company's Cleveland division.

John C. Hass, secretary, United States Radiator Corp., Detroit, Mich., has been elected a vice president, in addition to his present office. Mr. Haas, an employee of the company for thirty-eight years, was named production manager in 1946 and had served as assistant to the general sales manager and assistant to the manager of the operating department.

Sell THESE PROFITABLE OIL SAVING ITEMS

"DETROIT" Furnace Master A COMPLETE Furnace Control IN ONE UNIT



Easily applied, furnished with all internal wiring completed. Field installation requires only connection to 115 volt supply and low voltage cable to thermostat. All parts instantly accessible for cleaning and service. Compact, neat, efficient.

TYPES AVAILABLE

CRC-239-FFL provides two-speed control of draft motor.

CRC-239-FHL provides forced draft on high fire, natural draft on low fire.

CRC-239-FNL is designed either for natural draft burners or continuous forced draft.

CRC-239-FFL and CRC-239-FHL provide a predetermined post-draft period, after room thermostat is satisfied, to burn excess fuel.

REMOTE BULB BLOWER AND LIMIT CONTROL

With integral "summer" settings for controlling air conditioning fan. Blower range fully adjustable from 100° to 180° with 25° differential. Limit control reduces fuel delivery to pilot at desired temperature. 5112

1

"DETROIT" CRC-239-P AND CRC-239-PF ADD-ON CONTROLS

Easily installed on manual type CRC-239 Float Valves. With "Detroit" No. 411 Room Thermostat they make space heaters and floor furnaces automatic, save oil, increase comfort.

2

"DETROIT" NO. 411 ROOM THERMOSTAT

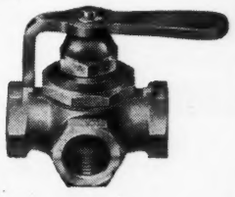
Eliminates overheating and consequent fuel waste. Accurately controls temperature for greater comfort.

3

"DETROIT" CRC-433 FUEL TRANSFER PUMP

Automatically keeps heater supplied with fuel. Eliminates hand carrying, spilling and mess. No attention needed after installation.

4



"DETROIT" CRC-520 THREE-WAY VALVE

Used where a second tank is installed for reserve supply and more economical purchasing of oil. Cast brass body, ⅜" or ½" F.P.T. connections.

DETROIT LUBRICATOR COMPANY

DIVISION OF AMERICAN RADIATOR & Standard Sanitary CORPORATION

General Offices: 5900 TRUMBULL AVENUE, DETROIT 8, MICHIGAN

Canadian Representatives—RAILWAY AND ENGINEERING SPECIALTIES LIMITED, *MONTREAL, TORONTO, WINNIPEG*

"DETROIT"

"DETROIT" HEATING AND REFRIGERATION CONTROLS • ENGINE SAFETY CONTROLS • FLOAT VALVES AND OIL BURNER ACCESSORIES
"DETROIT" EXPANSION VALVES AND REFRIGERATION ACCESSORIES • STATIONARY AND LOCOMOTIVE LUBRICATORS

fueloil & oil heat

John Norris of Lennox Writes Book on Warm Air

OILHEATING DEALERS who want a complete text on warm air heating may find the book they are looking for in "Warm Air Heating and Winter Air Conditioning." The book, originally developed for the sales and dealer organization of the Lennox Furnace Co., Marshalltown, Ia., Syracuse, N. Y., and Columbus, Ohio, copies have been made available to those outside the firm's organization.

"Warm Air Heating" was written by John W. Norris, vice-president of the Lennox Furnace Co., and well known in the warm air heating business. He has been a leader in technical instruction for factory and dealer staffs. He gives full credit to the work of the company's laboratory staff and its engineering departments for help in compiling the wealth of warm air heating information presented in the book.

Besides complete information on the measurement of heat loss from different types of structures, selection of equipment and the design of the system, the book also covers firing with three fuels, conversion of the gravity furnace to forced air, and the conversion of coal furnaces to automatic fuels. The book of more than 300 pages is priced at $5.00.

Tested And Approved by Large Industrial Users Over A Period Of Years Involving Millions of Gallons of Fuel Oil Experience!
Greater Savings in Fuel Oil
Higher Profits for Dealers
Faster Repeat Business
Wilcolene
FUEL OIL TREATMENT
NON-TOXIC
NON-INFLAMMABLE
NON-CORROSIVE
WILCOLENE . . . sells because it saves. You profit because Wilcolene "works" and you profit again and again from repeat sales.
AVAILABLE FOR CONSUMERS EXCLUSIVELY THRU FUEL OIL DEALERS!
And Oil Burner Equipment Distributors
WILCOLENE . . . is available to industry in 5, 30, 55 gallon drums.
INDUSTRY'S PREFERENCE IS OUR BEST REFERENCE!

- ELIMINATES OBJECTIONABLE OIL ODORS
- DISSOLVES SLUDGE, GUM AND TAR
- ELIMINATES CARBON DEPOSITS AND SOOT
- REMOVES MOISTURE
- STOPS INSIDE RUST AND CORROSION
- INSURES FREE AND CLEAR BURNERS
- INCREASES COMBUSTION EFFICIENCY
- LOWERS MAINTENANCE COSTS
- ELIMINATES TANK CLEANING DELAYS

An Added Feature—WILCOLENE . . . conserves Kerosene & Wicks by burning off carbon, giving wicks longer life.

COSMIC CHEMICAL & REFINING COMPANY, INC.
17 West 60th Street, New York 23, N. Y

Paint Magazine Asks Better Burner Adjustment

NATIONAL LEAD COMPANY'S house magazine, *Dutch Boy Painter,* in a recent issue answered a question from a reader on removal of "oil-burner soot" before painting.

The staff answered that any of the commercial paint cleaners on the market probably would remove the film, or if the side wall paint were chalked considerably, the film probably could be removed with a fairly stiff brush.

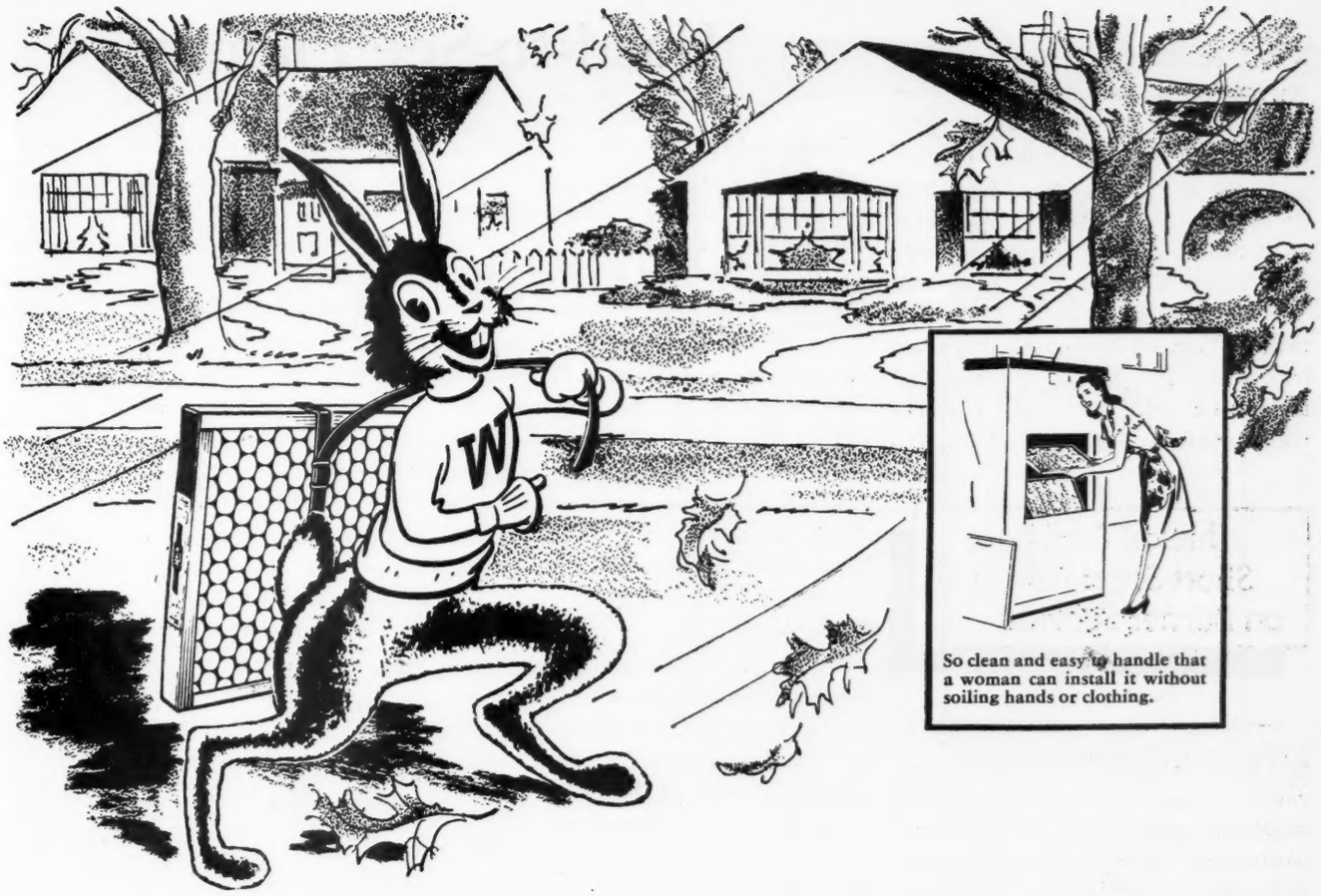
"While we are on the subject," the answer continues, "it may be appropriate to point out here that a properly adjusted burner, using the correct type of oil, ought not produce the soot that is causing the trouble. This angle might well be mentioned to the house owner—it may save him fuel and a premature 'aging' of the Dutch Boy paint job you are about to do for him."

The gospel of proper burner adjustment is becoming understood among those outside the industry. All we need now are more conscientious dealers to do it.

Chicago Contractors Distribute Heating Booklet

"HOW CHICAGOLAND HOMES ARE HEATED" captioned a booklet distributed at the recent Chicago Home Show by the Heating, Piping and Air Conditioning Contractors' Chicago Association, Chicago 1, Ill. Prepared under the direction of the Association's Publicity Committee, written and edited by Plumbing and Heating Industries Bureau, the booklet depicted radiant baseboards, convectors, radiators and panel heating coils. The cover featured an aerial view of a typical Chicago suburban area.

Each type of equipment described was pictured installed to show exactly how completed installations will appear. The booklet concluded with a concise description of the essentials of good heating, stressing the importance of competent workmanship.



So clean and easy to handle that a woman can install it without soiling hands or clothing.

It's Herbert the HARE

out to score again in fall replacement sales

Wilson's H*AIR* Filters continue to gain in public acceptance. Because hair is a natural filtering medium—because it does a better job of cleaning the air—because woodwork and furniture are noticeably cleaner after a season of heating and air conditioning—demand for Wilson's H*AIR* Filters is increasing every year. Now is the time to get set for fall replacement business. Now is the time to tune in with popular demand by ordering your supply of Wilson's H*AIR* Filters in the clean, easy-to-install honeycomb casing.

Ride along with a winner
Send for FREE sample with details and prices.

Wilson & Co., Inc. (*Air Filter Division*) 4100 S. Ashland Ave., Chicago, Ill.
Western States Representatives: Harold Winningham & Company • Seattle • San Francisco
Los Angeles • Denver • Salt Lake City • El Paso

fuel oil & oil heat

Hard-to-See Flames

AN OILBURNER DEALER wired an equipment manufacturer for help after his service men reported it was too difficult to see the flame in a new, very compact furnace-burner unit. "You can't get a decent look at the flame," the men reasoned, "so you can't adjust for proper combustion."

The factory engineer who responded to the SOS showed the service men a few tricks needed to check on hard-to-see flames and helpful also for furnaces with large flame observation doors.

fueloil & oil heat Short Short Article on Burner Service

"That little peek-hole you don't like tells more about the flame," said the engineer to start out, "after you've had experience using other methods to check combustion. True, in this furnace the peek-hole is small because of furnace-design factors, thus it gives a peek at only part of the flame. But you don't guess about the balance of the flame; you take the steps needed to make certain the entire flame is burning properly."

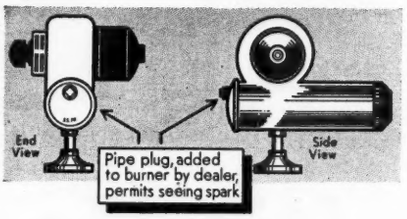
Here are the engineer's instructions: First, run the burner for about 15 minutes and tune it as best you can for quiet, efficient combustion. Use the peek-hole all the while you work on the burner. Finaly, aim to reduce the air-flow to the flame to the point which gives you, just for try, a trace of smoke.

Second, use a good flashlight and observe the smokepipe gases through the draft regulator opening. Tip open the draft regulator quickly and play your light into the smokepipe towards the furnace side of the draft regulator to check the gases coming from the furnace. If you don't see any smoke, tune the burner for a trace of smoke in the smokepipe.

Third, go outside and study the gases coming from the top of the chimney. You should see a trace of smoke. A service man needs the experience which permits him to tell, by looking into a draft regulator, just how much smoke is coming from a chimney. This improves his judgment and eliminates the need to go out and look at chimneys.

Fourth, test the CO_2 of the smokepipe gases. With a trace of smoke, you should get 11% to 13% on an excellent installation. If you get a lower reading, make a CO_2 test of a gas sample drawn from the flues of the furnace while the over-fire draft is positive because you have wired open the draft regulator or blocked the smokepipe with a piece of firebrick. You take this special CO_2 reading, using a hole drilled in a flue clean-out door, to make certain that a low reading obtained by using a smokepipe test opening is not caused by air leaks in the smokepipe or smokehood.

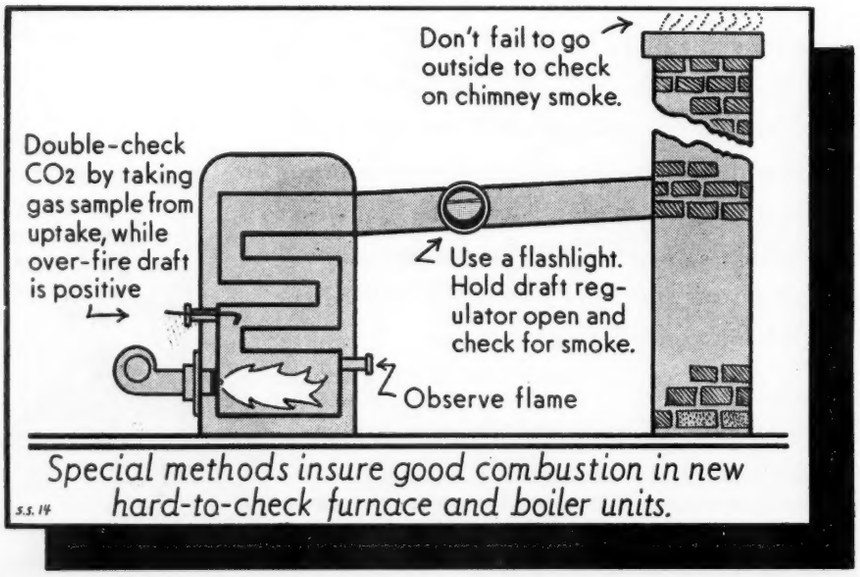
Fifth, open the air damper on the burner sufficiently to obtain a CO_2 reading about 2% or 3% lower than was obtained with chimney smoke. This makes certain of bright, clean combustion. It gives a margin of safety. Finally study the peek-hole, for it now shows the kind of flame to tune for on all installations of furnaces of this particular model.



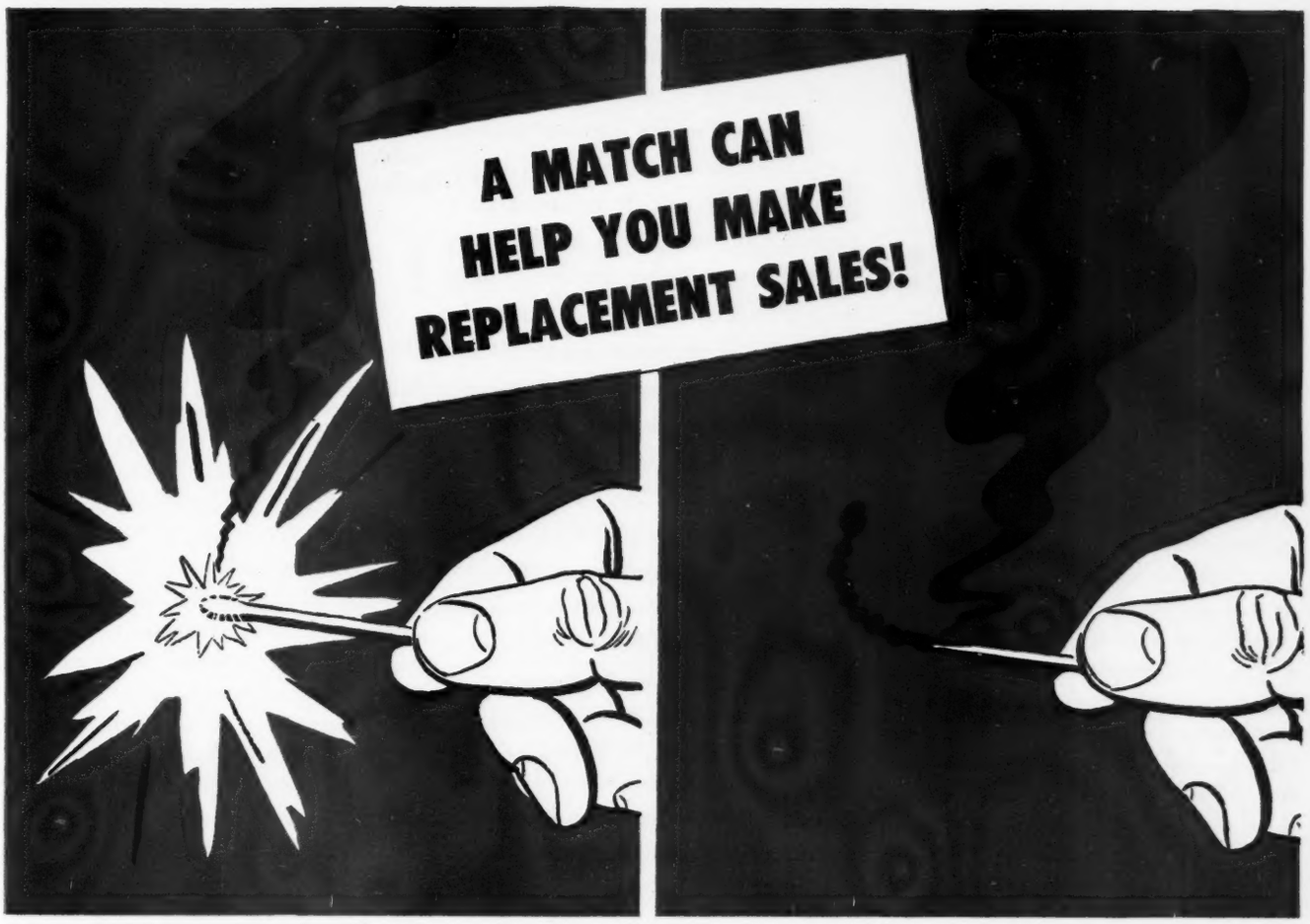
Where you obtain perfectly clean combustion, i.e., no trace of chimney smoke, together with a CO_2 reading of 9% to 11%, you need not worry about dirty burning in the parts of the flame you cannot see through the peek-hole. Real security comes from ascertaining first that 11% to 13% CO_2 is obtained with only a trace of smoke, then leaving the burner adjusted for 2% to 3% lower CO_2.

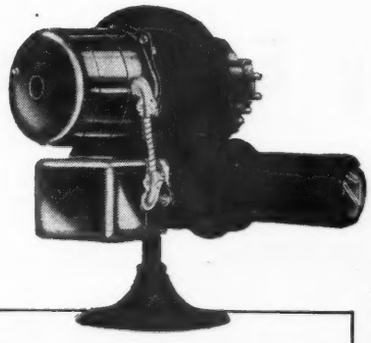
Having found this suitable for the burner models he handles, one dealer improves each burner in his shop before he installs it. Drilling and tapping the gun tube cover, he fits it with a ¾" pipe plug. On the job, his service man can remove this plug to see the spark of the ignition system, to check for dirt or carbon in the gun tube and on ignition system insulators, and to see the part of the flame close to the nozzle. Dripping of oil from either end of the nozzle adapter, for example, can be detected easily with the burner running.

Of course, this idea fits only burners in which the view from such a peek-hole is not blocked by air-handling or ignition system parts in the gun tubes.


Don't fail to go outside to check on chimney smoke.
Double-check CO2 by taking gas sample from uptake, while over-fire draft is positive
Use a flashlight. Hold draft regulator open and check for smoke.
Observe flame
Special methods insure good combustion in new hard-to-check furnace and boiler units.
S.S. 14

For units, *whose design makes it difficult to observe combustion conditions, here are the steps to follow to insure proper adjustment. The smaller drawing on this page illustrates one method of installing in the gun tube cover a ¾" pipe plug to permit a direct view of the flame and ignition assembly.*





HERE'S THE TEST: Strike a match and then extinguish it. See the cloud of smoke as it flames up and again right after you put it out. This is the best way to demonstrate the before-and-after smoke puff that cuts down heat volume by depositing soot on the heating surfaces when ordinary, conventional oil burners start and stop.

Use this simple demonstration to show customers how ordinary burner starting and stopping causes smoke and soot, cuts down heat volume.

Show homeowners how the ECONOMY CLUTCH on the GILBARCO OIL BURNER provides smokeless starting and stopping and *actually gives more heat per gallon!* This single patented feature is the most important oil burner advance in 25 years, and is certain to impress any customer looking for a way to cut fuel consumption.

TO DEALERS WEST OF THE APPALACHIANS

Talk it over with GILBARCO. Be sure you get the advantages of selling the modern oil burner, the new oil-saving GILBARCO, the burner that is in great demand as the ideal replacement burner. Franchises are now being awarded. *Wire or write today!*

Gilbarco

THE OIL BURNER WITH THE ECONOMY CLUTCH

GILBERT & BARKER MFG. COMPANY
WEST SPRINGFIELD, MASS., AND TORONTO, CANADA

fuel oil & oil heat

Reader's Problems

Q. In a pinch, should I tell a burner owner who telephones me about this to try using gasoline in his burner?

H.B.S., Mendota, Ill.

A. No! It's been done safely in the laboratory by experts, but saying that a home owner never should try it is understatement. You can go only this far: Unable to get the No. 2 or 3 oil he desires, a home owner can use No. 1 oil.

* * *

Q. You talk about electric motor temperatures in item #4, page 188, your March issue. I have a problem. In a normal basement, say 80° temperature, the motor on this model conversion burner gets so hot after an hour that you can barely keep your hand in close contact with it for a minute. I'm wondering if the motor will stand up well with the same burner model installed in the hot "dog-house" of an entirely jacketed furnace-burner unit, where the air temperature around the motor may be up to 140°.

B.T., Lansing, Mich.

A. You do not provide extremely complete, precise information, but from what you say it would not be surprising if the burner motor operates satisfactorily with the burner installed in the furnace-burner unit. If you must get a dependable answer to the question, why not make tests? To get an answer quickly, you might, for example, reduce the ventilation of the burner enclosure in a test set-up, and for several weeks run the motor with the ambient temperature somewhat higher than you expect on any actual installations. Make tests with the air surrounding the motor 50°F. warmer than you expect it to be on typical installations. In certain instances, ordinary motors are doing well in warm locations, but need oiling more frequently than usual or need special lubricating oil. The burner motors of boiler-burner and furnace-burner units run cooler with increased jacket ventilation or with shields to prevent radiant heat from increasing the motor temperatures.

Q. In attempting to plan to fire oil in smallest furnaces intended for gas but now located where gas for heating is no longer available, I must know how many cubic inches of combustion space are needed to burn cleanly one gallon or one pound of oil per hour.

G.H.O., New York.

A. Since the answer to your question depends entirely on the design of the particular oilburner and furnace, we regret that we cannot give you a number which solves your problem. To solve your problem, do your best to oil-fire the gas furnaces in the laboratory and study the results. Then install about a dozen test units in actual homes. In a month or two you will have a good idea regarding whether or not you have a foolproof solution to the problem; in six months, you'll know a great deal more. The best in oilburner knowledge, engineering, and experience is needed to handle your problem. Take it up with a few of the oilburner manufacturers who you believe are the most capable in the industry.

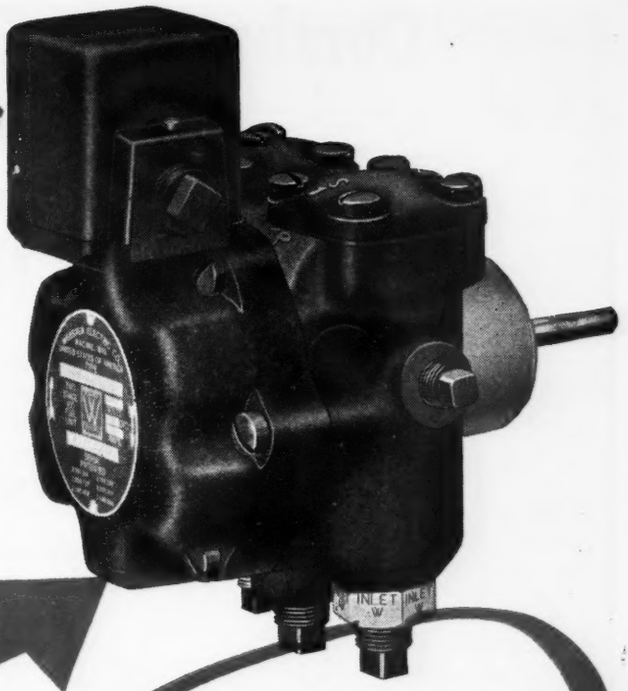
117 Years of Engineering Experience in Back of *The Bethlehem* DYNATHERM !

A heating unit becomes such an integral part of a home that one must have something more than a mere promise, something more substantial than a guarantee, to insure against the possibility of future trouble. You must have the backing of an institution capable of fulfilling its promises. Such an institution is the Bethlehem Foundry & Machine Company.

A few exclusive Bethlehem Dynatherm territory Franchises are still available. Wire or write immediately for full information.

THE BETHLEHEM FOUNDRY & MACHINE COMPANY
BETHLEHEM, PENNSYLVANIA

The new WEBSTER ELECTRIC Instantaneous Cut-off FUEL UNIT



The need is here . . . we're ready for it!

Problems posed by modern, high-efficiency furnace design and use of catalytically cracked oil demand instantaneous cut-off of fuel. Again Webster Electric saw the need before it developed, and led the way to the logical solution with the ICO Fuel Unit.

Flues are kept bright and clean indefinitely because soot and carbon deposits caused by after-fire, as burner shuts down, are eliminated. The Instantaneous Cut-Off Fuel Unit instantly extinguishes the burner flame as the nozzle line pressure is instantly cut to zero.

This Fuel Unit is particularly efficient where low draft firing is employed . . . where the combustion chamber is under pressure and flue gases are exhausted through restricted flue travel. It is also ideal for very small and critical units. In such cases maintenance of high efficiency depends on complete absence of soot and carbon deposits. Instantaneous cut-off is therefore essential.

The Webster Electric Instantaneous Cut-Off Fuel Unit is adaptable to present-day equipment and modernization of equipment six to eight years old. Read the features shown here. Write to Webster Electric for complete information and folder.

Webster Electric Fuel Units are made in Canada by Canadian Acme Screw & Gear, Ltd., Toronto, Canada.

HERE ARE THE MAIN FEATURES!

Easy to Install—Entirely standard with Webster Electric mounting and service characteristics. Parts are identical in seal—strainer and valve with well known Webster Electric standard fuel units. Electrical connections can be brought into the mechanism from either side of unit.

No Spilling of Oil—There is no spilling of oil when servicing strainer.

Added Safety Features—In conjunction with the electro magnetic valve, a standard duplex regulating valve operates normally and can operate independently of the electric action.

Simplicity of Design. . . No engaging or disengaging mechanism of close fitting parts that might stick.

No High Pressure. . . No high pressure sealing is required, magnetic valve operates in by-pass chamber.

For Either Single or Two Stage Unit . . . Furnished for either type.

Design. . . This new Webster Electric Instantaneous Cut-Off Valve is of the same high standard of perfection as all other Webster Electric products.

WRITE FOR FULL INFORMATION!

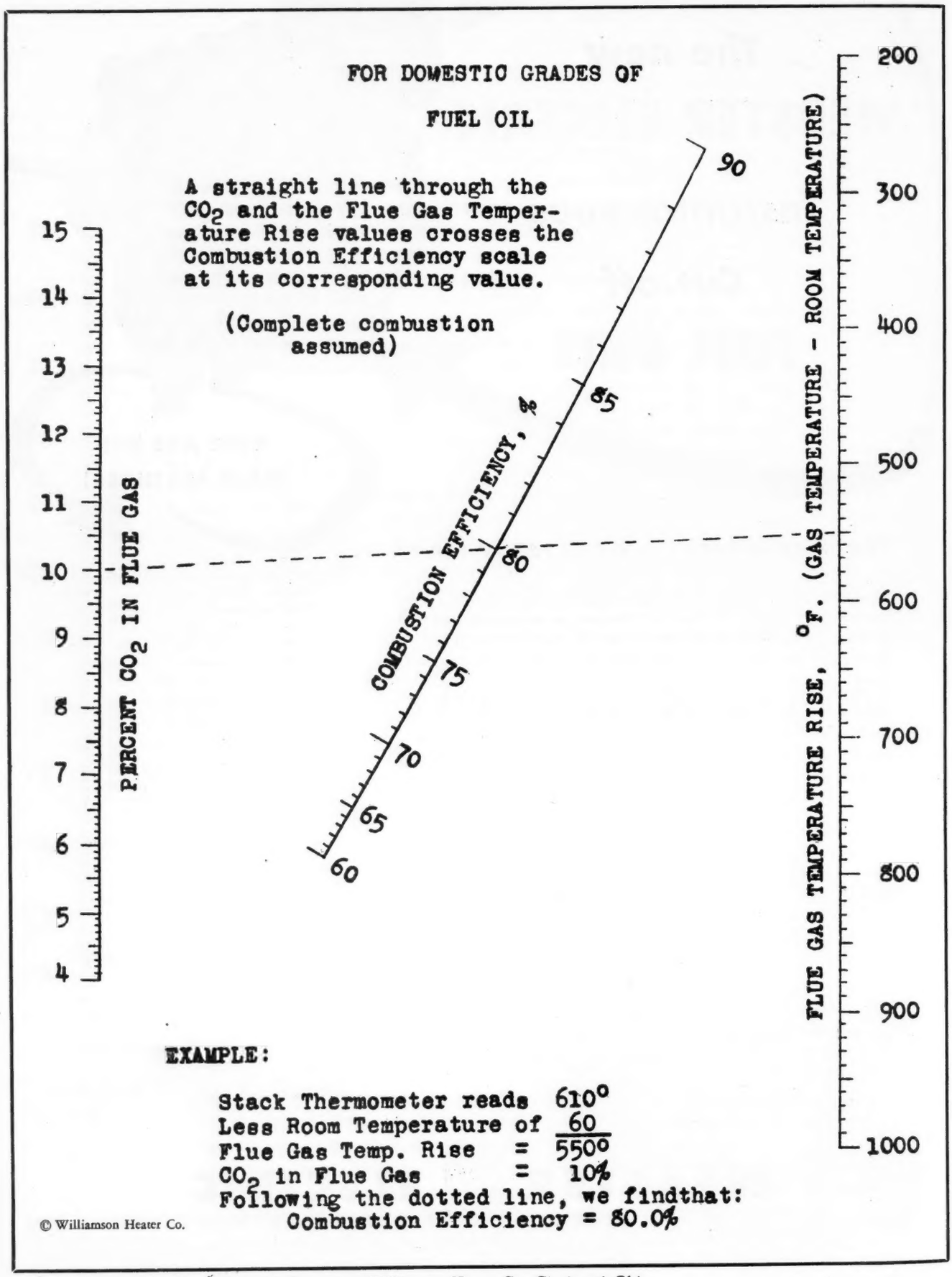
WEBSTER ELECTRIC
RACINE WISCONSIN

Established 1909

Export Dept. 13 E. 40th Street, New York (16), N. Y. Cable Address: "ARLAB" New York City

"WHERE QUALITY IS A RESPONSIBILITY AND FAIR DEALING AN OBLIGATION"

Combustion Efficiency Chart

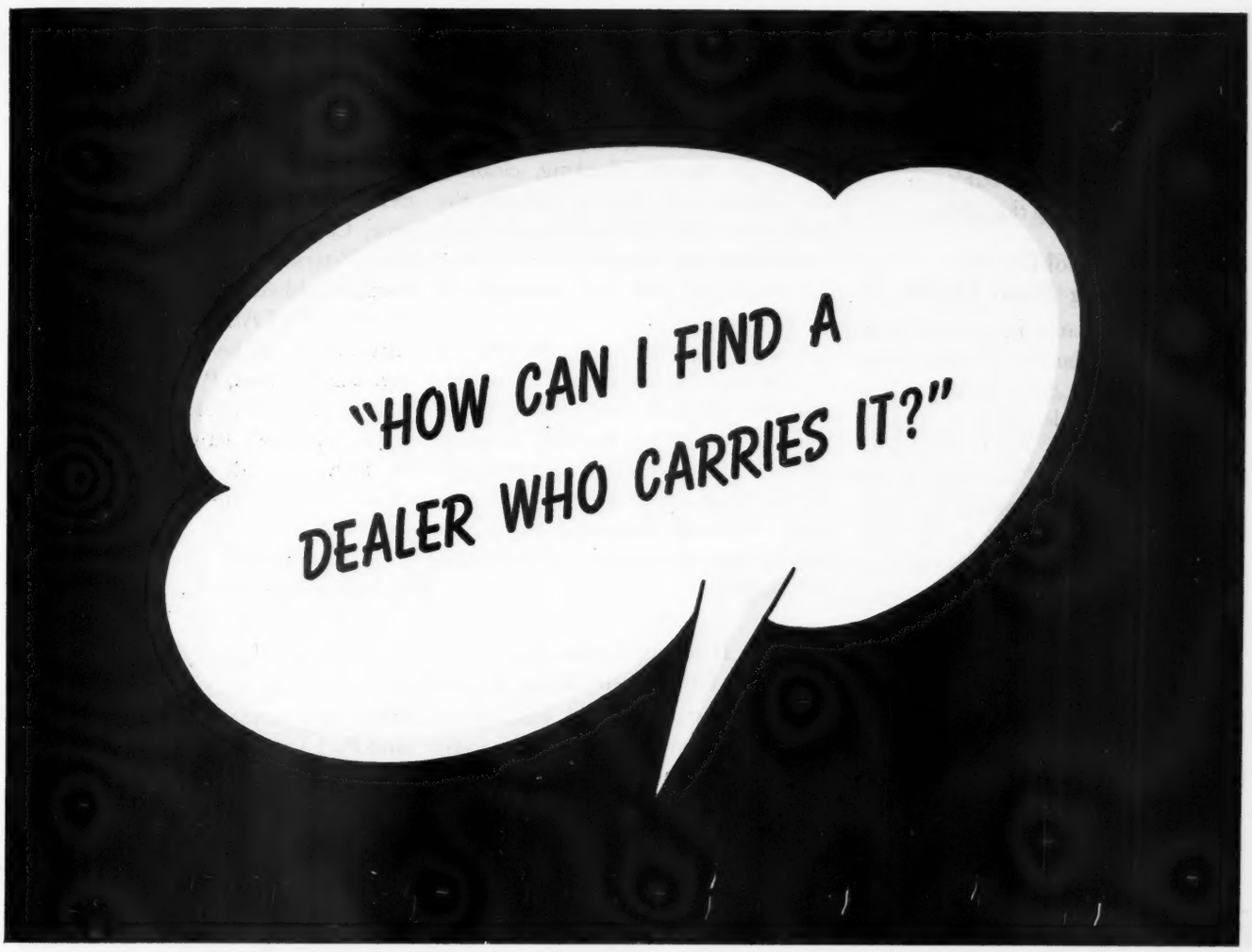


EXAMPLE:

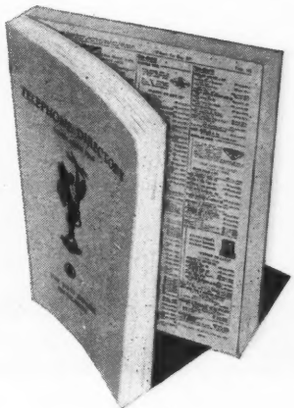
Stack Thermometer reads 610°
Less Room Temperature of 60
Flue Gas Temp. Rise = 550°
CO_2 in Flue Gas = 10%
Following the dotted line, we findthat:
Combustion Efficiency = 80.0%

© Williamson Heater Co.

Courtesy: G. Stuart MacLeod, Research Supervisor, Williamson Heater Co., Cincinnati, Ohio



Here's a simple way for you to answer this question



Identify your business in the 'yellow pages' (classified section) of the telephone directory.

That's where people in your community look when they're seeking an oil dealer.

Will they find you there?

The brand of oil you sell, the equipment you handle, the service you specialize in . . . all these points can be featured through your promotion in the 'yellow pages.'

The Classified is the nation's buying guide.

BELL SYSTEM

For further information, call your local telephone business office.

fuel oil & oil heat

Industry Groups

Activities of local and national industry associations are reported monthly in this department. Secretaries are invited to send reports of their Group's activities to reach the editor by the 20th.

OHI Offers Booklet On Heating Plant Overhauls

A BOOKLET, prepared by and available from the Distribution Division, Oil-Heat Institute of America, Inc., New York 16, N. Y., described in detail a "12 Point Heating Plant Overhaul." Suitable to use as an envelope stuffer or separate mailer, if desired, the booklet's back page is left blank for imprinting names and addresses, plus information on price, details on service or other copy a dealer might select.

Opening paragraphs explain the necessity of periodic service and offer preventive maintenance as a method of correcting trouble before it starts. Each of twelve steps to be followed in a heating plant inspection and overhaul then are described, with an accompanying illustration to show the affected portions of the system.

Steps 1 and 2 are shown as boiler scraping and high power vacuum cleaning, 3 and 4 as cleaning nozzle and strainers. Succeeding steps cover lubricating the burner, checking, cleaning and adjusting of controls, cleaning the thermostat, inspecting the heating system and sealing air leaks. The final step is pictured as a test and adjustment of the oilburner.

Copy throughout the booklet is written as individual dealers might prepare it to sell their own customers, and the illustrations are intended to show a typical oilburner serviceman performing the twelve steps mentioned. Distribution is being supervised by W. O. Spiess, national secretary, Distribution Div., OHI.

Oregon Heating Industries New Association Name

A SPECIAL MEETING held June 9 approved a resolution to change the name of the Oregon Fuel Merchants Association to Oregon Heating Industries, Portland 4, Ore. More than two-thirds of the total membership approved the change, which became effective July 1.

On June 25 a Willamette Valley meeting was held at Salem, Ore., attended by thirty-three dealers. Al Loucks, Home Fuel Oil Co., Salem, was chairman of the gathering, arranged for members and guests from Salem, Eugene, Corvallis, Albany and Lebanon. Fred Peterson, City Commissioner of Portland, delivered a talk on merchandising, and Bill Alexander explained the organization and benefits of the association. Lin Bowman, Pacific Coast Chairman, Distribution Division, OHI, told of the Institute's activities and stressed the high standards of burner performance and installation that should be achieved.

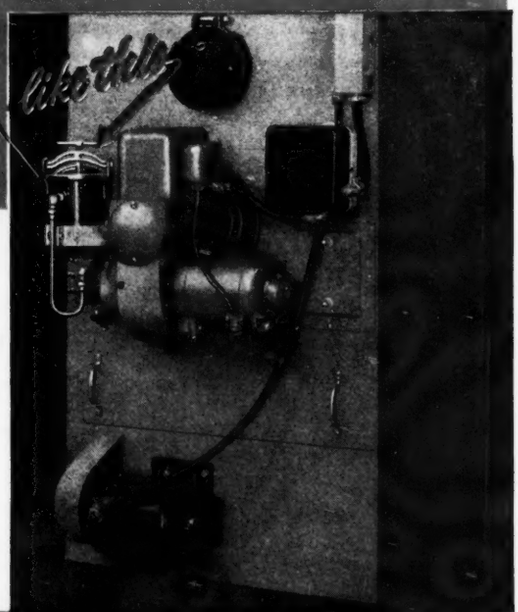
Birmingham Addresses New England Fuel Dealers

JOHN P. BIRMINGHAM, president, White Fuel Corp., Boston, was guest speaker at the 1948 convention of the New England Fuel Dealers' Association, Boston, held during June at Wentworth-By-The-Sea, Portsmouth, N. H. Speaking specifically about fueloil supply prospects for the coming heating season, Mr.

The General

CAN INCREASE YOUR SERVICE DOLLAR VOLUME WITH INSTALLATIONS

- Make profits on every installation.
- Eliminate troublesome call backs.
- Build regular repeat business through cartridge replacements.
- Help customers save money by giving cleaner burning fuel.
- Build goodwill and customer loyalty by providing trouble-free operation.



General HAS THE RIGHT FILTER FOR EVERY OIL HEATING PLANT!

The *General* is popular with all contractors, dealers and fuel oil service companies because it has proven the best fuel oil filter for heating plants, hot water heaters, and room heaters. The *General* will prove a profitable leader for you, too! Report after report in our files bear out these statements.

For average installations three models, DeLuxe 2A-300, Master 2A-700 and Economy 1A-25, are outstanding leaders in the *General* line because they are priced to sell easily, built to give long-lasting service, and designed to provide high-degree performance.

There is no better time than *now* in letting *General* Fuel Oil Filters increase your service dollar volume. Contact your jobber immediately or write direct for information and discounts.

Listed: Re-examination Service, Underwriters Laboratories

GENERAL FILTERS INCORPORATED — GENERAL FUEL OIL FILTER — 12890 WESTWOOD AVE. DETROIT 23, MICHIGAN

SEE YOUR JOBBER OR WRITE DIRECT TO THE FACTORY

What The SBI Label Means To You!

. . . The SBI label is the insignia of the Steel Boiler Institute, Inc., an organization of boiler manufacturers who have voluntarily agreed that their products will always be constructed in accordance with the rigid standards set by the Low Pressure Code of the American Society of Mechanical Engineers—and that every steel boiler bearing the label has passed exhaustive performance tests prescribed by the SBI Rating Code.

. . . It is your assurance that an SBI-approved boiler will always deliver rated capacity.

. . . It is your guarantee that the steel boiler on which it appears is well constructed and that there will never be a compromise with quality even in the face of rising material and labor costs.

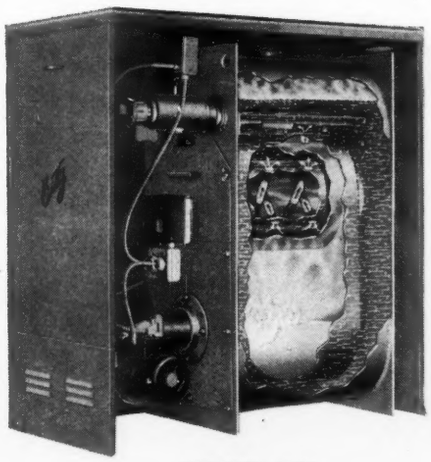
. . . It certifies the *quality* and *performance* of the boiler on which it appears.

. . . The SBI label is a GUARANTEE of material, workmanship and design.

CROTTY IS PROUD of its membership in the Steel Boiler Institute. Its boilers have been tested and approved by impartial SBI engineers.

The ratings they carry are the ratings they will deliver.

STEEL BOILER INSTITUTE
SBI
HEATING · PROCESS · POWER



MODEL S24

Crotty

CROTTY MFG. CORP.
FLUSHING, N. Y.

Designers and Patentees of the famous Waterwall Furnace for Commercial and Industrial use.

STEEL BOILER INSTITUTE INC.
1207 Land Title Bldg., Broad and Chestnut Sts.
Philadelphia, Pa.

Birmingham expressed the belief that 6% more crude would be available for refining. With motorists wanting 8% more gasoline, diesel consumers 25% to 30% more and heating oil users asking for 15% more, he says, "Here is what I believe will happen. The motorist will get what he wants, the railroads will get their diesel oil requirements, and the heating oil trade will get about 10% more oil than they had last year." These consumer elements will be satisfied at the expense of heavy oil, Mr. Birmingham continued, and with about 2% required to take care of late burner installations that did not need a full year's supply last season, heating oil will net an 8% increase.

The concluding portions of Mr. Birmingham's speech were devoted to refuting the assertion that our oil reserves are being depleted.

Wisconsin Newspaper Ads Stress Good Installation

A SERIES of three newspaper advertisements have appeared in the *Milwaukee Journal,* sponsored by the Wisconsin Oil-Heat Association, Milwaukee 2, Wis. The first of the series, which ran June 13, was captioned "Good News for Fuel Oil Users!"

It briefly reviewed the achievement of the oil industry last year in supplying an unprecedented demand and emphasized that Wisconsin would receive its fair share of additional fueloil for new burners this year. Before listing the names of all members of the Association, present users were urged to have their oilburning equipment checked and tuned up, and, where advisable, to replace inefficient units with new burners. Prospective users were referred to members of the Association, with the advice that any burner functions well only if installed well.

The emblems of the Wisconsin group and also Oil-Heat Institute were displayed prominently. Other advertisements appeared in the *Milwaukee Journal* on June 27 and July 11.

MD

OIL BURNER MOTORS

More Power per Pound

Less Service Cost per Sale

Buy Long Life—Trouble Free

MD MOTORS

Specially Designed for Oil Burner Use

ELECTRIC MOTOR DEVELOPMENT CO.

WICKLIFFE • OHIO

ESPA Announces Dates Of Fall Convention

AN ANNOUNCEMENT by Harry B. Hilts, secretary, Empire State Petroleum Association, Inc., New York 17, N. Y., reveals plans to hold the association's Fall Convention at the Hotel Statler, Buffalo, N. Y., from September 8 to 10. Details of the program and speakers will be released at a later date.

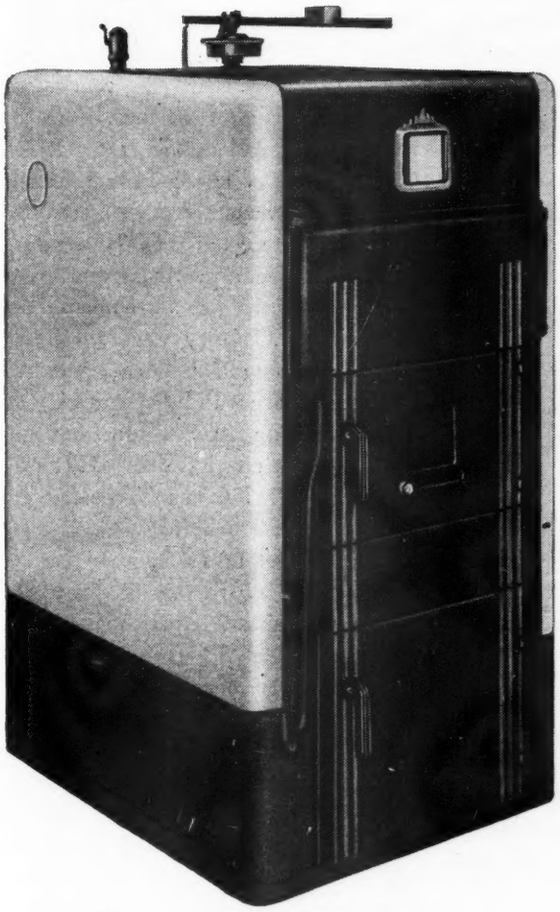
Fan Manufacturers Offer "Fresh Air" Booklet

A STORY of modern ventilating fans has been prepared by the National Association of Fan Manufacturers, Detroit 2, Mich., and is available for immediate distribution. The 16-page booklet, entitled, "Fresh Air—at the touch of a switch," employs headlines and pictures to tell its story and pictures electric fans in all types of domestic, commercial and industrial applications.

Booklet Is Warm Air Heating Sales Tool

A SIXTEEN-PAGE BOOKLET, published by National Warm Air Heating & Air Conditioning Association, Cleveland 14, Ohio, is reported to have been used successfully by dealers in promoting

ADAPTABLE TO ANY FUEL



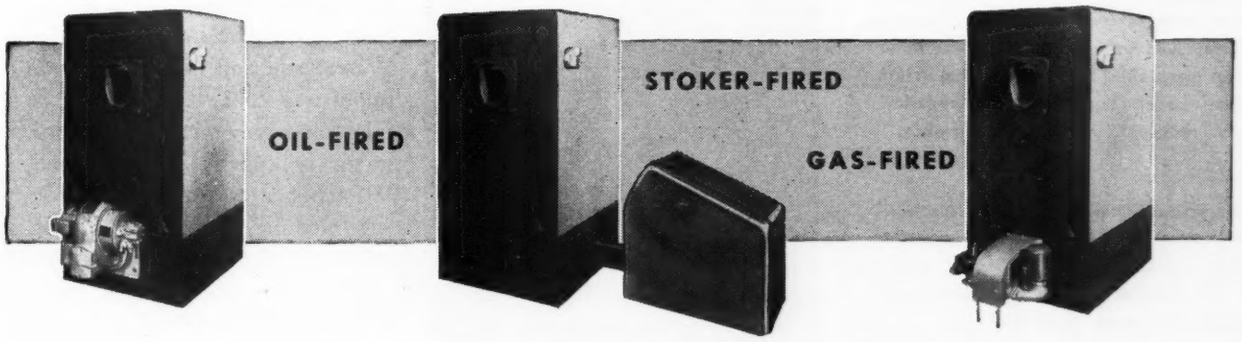
"200" SERIES
NATIONAL HEAT-EXTRACTOR
HAND-FIRED

CONVERTIBLE
TO ANY FIRING METHOD

Here is one boiler, for steam or hot water, that assures continuous heating comfort through any type of prolonged fuel crisis. Designed for average size homes, or for small commercial buildings, the "200" Series National Heat Extractor is a truly versatile and modern cast iron heating boiler.

Easily converted from hand to automatic firing after installation, it is readily adaptable to any desired fuel or method of firing. Important, too, is its unique economy of operation—the planned result of its Extended Heating Surface, Multiple-Flue Sections, Extra-thick Insulation, Special Baffles (for oil and gas firing) —and unusually generous proportions.

Domestic hot water, year 'round, is another convenience of the "200" Series, offered by the easy addition of a tankless or storage type water heater.



For complete information on the "200" Series Heat Extractor—or the equally versatile "100", "300", "400" and "500" Series for smaller or larger installations—phone our nearest office or write to us at Johnstown.

THE NATIONAL RADIATOR COMPANY
JOHNSTOWN, PENNSYLVANIA

sales of warm air heating installations. The booklet, "Seven Steps to Indoor Comfort," is adaptable to the sales program of any organization selling warm air heating equipment since it makes no mention of particular products. It sells only the idea of the desirability of adequately planning and providing for year-round indoor comfort when building or remodelling a home.

It is printed attractively, with many illustrations in four colors. Each of the seven steps is described separately, while the back cover is blank to provide for space for dealer imprinting, where desired. Seven conditions of air quality required for comfort are listed as: satisfactory temperature, proper amount of water vapor, imperceptible movement, freedom from dust, dirt, smoke and pollen, freedom from staleness, absence of germs and bacteria and adequate density. Home owners or builders are counselled to consult local heating dealers to discuss the correct warm air system to achieve all seven conditions.

In quantities of 100 booklets are offered at 10¢ each; 9¢ each in quantities over 100. Complete information is available from the Association.

NYOHA Holds Golf Party, Outing and Field Day

FOR THE FIRST TIME this year's golf party and outing of the New York Oil Heating Association, Inc., Long Island City 1, N. Y., were held on separate days. Both events were well attended and so well received that the arrangement will be continued next year.

On June 29 the golf tournament, held at Pomonok Country Club, Flushing, N. Y., was attended by one hundred and fifty members and their guests, who enjoyed a sunny day, a luncheon and dinner, which concluded the day's program. Farrell Kaufman repeated his triumph of last year in the golf competition and retains for another year the silver plaque awarded annually to the winning member. Neil Breen took first prize among the guests and received a trophy. He becomes the guest representative at next year's golf tournament.

The annual outing and field day, featuring a softball contest between dealer and manufacturer teams, was held at Schmidt's Farm, Scarsdale, N. Y. on July 15. In the official contest the dealers bested the manufacturer softballers by a score of 8 to 5, but the manufacturers avenged themselves in an unofficial playoff. The dealer's victory is entered in the records of this year's outing. Another spirited contest saw teams from Westchester and New York strain in a tug-of-war contest. After one or two false starts and removal of the rope from stakes imbedded in the ground, the Westchester team won. Hoop races, raw egg catching, horseshoe pitching and other sports rounded out the afternoon's program. An excellent shore dinner and awarding of prizes sent the one hundred and fifty who attended home in a happy mood. It is planned to hold next year's outing on June 28 at the same location.

Discusses Dealings With Architects, Contractors

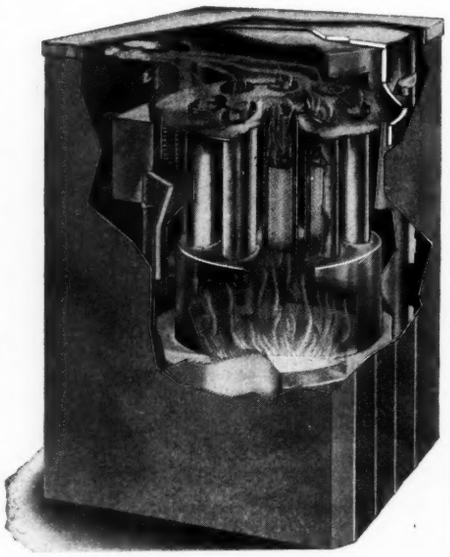
THE TWENTIETH in a series of circulars on various phases of home planning and construction prepared by University of Illinois and issued by The Small Homes Council, instructs prospective home builders in their dealings with architects

YOUR BEST BUY IN '48...

ACME DUAL 8

HIGH EFFICIENCY BOILER-BURNER UNIT

The amazing high efficiency of the Acme Dual "8" is due to the engineered design of the Stainless Steel intensifier tubes... which not only act as baffles but also radiate to the heating surfaces of the boiler tubes additional heat taken from the central gases which usually pass on to the chimney as waste. Their design also tends to maintain the same high temperature throughout the length of the tubes thereby producing much faster heating with a greatly reduced fuel consumption.



Beautiful, streamlined green wrinkle finished cabinet with chrome trim. Top covers easily removed for cleaning. Tankless water heater; removable type, 240 G.P.H. High Pressure boiler flues. Blanket insulation, 1½ in. rockwool. Heavy steel fire-box.

All accessories are conveniently and efficiently located on one side of the boiler making installing and servicing a simple task. The cabinet can be assembled after all piping has been completed.

Fast heat! Fast sales! Could you ask for anything better! Exclusive territories are still open for New Dealer Outlets. Write today for catalog and full details. Check the facts and you'll feature the Acme Dual "8" in '48.

ACME TANK AND WELDING

DIV. THE UNITED TOOL & DIE COMPANY

1031 New Britain Ave., Elmwood (Hartford), Conn.

Outstanding New

COMBINATION OIL-GAS BURNER

- **Same Burner Uses Both Fuels**
- **Automatically Switches From Gas to Oil and Back to Gas**
- **Accepted by Many Gas Companies**

AGAIN, Scott-Newcomb leads with a new development in the automatic heating industry—and opens up a new market for S-N dealers.

Here's why this burner has been accepted by many gas companies—even though they cannot permit installation of furnaces that use only gas.

This S-N combination burner burns gas until outside temperatures drop to the point where the peak gas load is reached —then it *automatically* switches to oil until the temperature rises again.

Other S-N Products for the home, office and factory:

- Air Conditioners
- Oil Burners
- Furnace Blowers
- Boilers—Steam and Hot Water
- Fans—Kitchen, Window, Attic
- Furnaces—Gas, Oil, Coal
- Garbage Grinders
- Stokers
- Water Heaters
- Water Softeners

Facts to Consider:

1. Opens a new market—a new sales opportunity to the buyer who wants completely automatic heat
2. Developed 20 years ago by S-N, pioneers and leaders in the development of automatic heating equipment. Designs were later *patented* and improved
3. Simple, rugged, one-unit construction that will last for years —not a makeshift unit
4. Highly efficient for both gas and oil
5. Completely tested and proved to meet the high standards required for all S-N products
6. Backed by thirty-one years of designing, manufacturing and selling experience

Most recent S-N development is a revolutionary new method of RADIANT HEATING which will ultimately attract the attention of progressive builders all over the country.

It will pay you to find out about this new opportunity for greater sales and profits. Wire or write today.

SCOTT-NEWCOMB, INC.

1442 South Boyle Avenue • St. Louis 10, Missouri

51

and contractors. Entitled, "Business Dealings with the Architect and the Contractor," the circular starts with getting plans and guides the prospective builder through to final termination of the contract.

Its rules for trouble-free building include having a good set of drawings and specifications which are adequate and describe all work involved. It recommends written agreements with architects and contractors and, while it maintains that work should be finished promptly, it cautions against unreasonably blaming the contractor for delays beyond his power to overcome.

Single copies of the bulletin can be obtained free by writing the Small Homes Council, University of Illinois, Urbana, Ill.

Wisconsin Groups Meets And Plans Golf Outing

A REGULAR MEETING of the Wisconsin Oil-Heat Association, Inc., Milwaukee 2, Wis., was held June 29 at the Wisconsin Hotel. The newspaper publicity campaign being conducted by the Association was a topic of discussion and members were urged to tie-in their local advertising with the Association's, and, if possible, run them on the same days.

Among other subjects introduced were discussions concerning future promotion of oilburner sales and an up-to-date report on the fueloil supply outlook for next heating season.

Plans were announced for the group's annual golf outing, this year being held at the Merrill Hills Country Club on August 13. Golf competition is scheduled to get under way at 1 o'clock. A cocktail party has been planned to precede the dinner, where golf and attendance prizes will be awarded.

Conclude Second I-B-R Short Course At Illinois

TWO HUNDRED AND FIFTY-SIX men from fifteen states and two provinces of Canada attended the second Short Course in hot water and steam heating systems, sponsored by the Institute of Boiler and Radiator Manufacturers, New York City, and held at the University of Illinois, June 15, 16 and 17. Of the enrollees eighty were advanced students, who had completed the first course held last year at Navy Pier, Chicago.

The course presented a detailed picture of the use and value of I-B-R installation guides and emphasized how the Institute's research program is helping industry. All students made group tours of the I-B-R Research Home, and the mechanical engineering laboratory of the University.

Two Events Planned By New York Old Timers

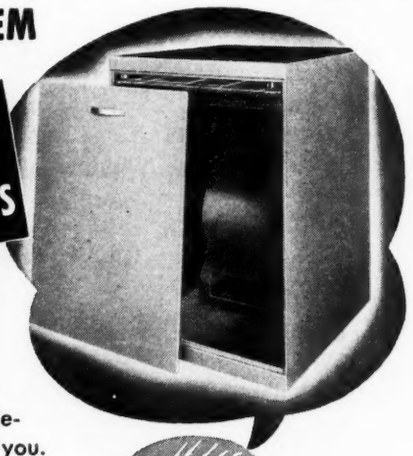
TWO SOCIAL EVENTS, sponsored by the Oil Heat Old Timers, Inc., Long Island City 1, N. Y., have been announced for members and their guests. The 3d annual fishing trip, scheduled for August 7, again calls for fishing in the Great South Bay, leaving from Lindenhurst, L. I., N. Y. at 8 A.M.

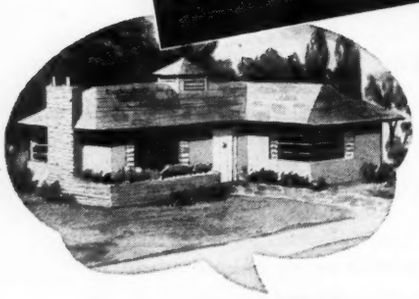
The second OHOT function announced is a moonlight sail on August 20, sponsored by the club for the entire industry. The party will leave from 42d Street and the North River, New York City, aboard the Islander at 7 P.M. and return at 11 P.M. after a sail up the Hudson River. Tickets are available from OHOT's Long Island City office.

HOW TO SOLVE THE SMALL HOME INSTALLATION PROBLEM

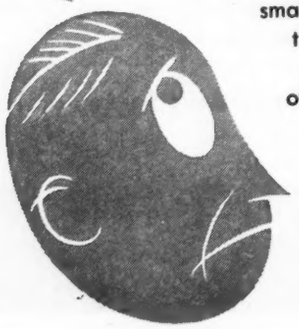
New... Compact... Low Cost...

Brundage "BABY B" BLOWER FILTER UNITS





If you are looking for NEW PROSPECTS, MORE SALES and BIGGER PROFITS, the new Brundage "Baby B" blower-filter unit is designed to open up the small home market for you. Because it is easily set up, because it will move up to 1050 CFM, because it meets the demand for conserving space, and above all because of its modest cost . . . it will help you to expand your sales and to get your share of the small-home ventilating markets. Write us today for specification and data sheet and be prepared to meet the requirements of this growing business.



THE Brundage COMPANY

Blower Specialists Since 1919

582 NORTH PARK STREET
KALAMAZOO 11, MICHIGAN

When Customers Want 3 Choices

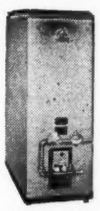
It's Luxaire's 3 in 1 ALL FUELS AIR CONDITIONING UNIT

Series AC-700-F

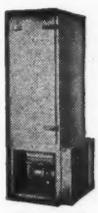
● When the job is "up-in-the-air" due to the uncertainty of which fuel will be more readily obtainable—you get all 3 choices with Luxaire's 3-in-1 All Fuels Air Conditioning Unit.

Because—the design and construction of this unit makes it easily converted and well adapted for any fuel—oil, gas, or coal.

You have automatic, submerged arc welded seams—large heating surfaces—long fire travel —all essential and necessary for the successful burning of gas, oil or coal.



Series G
Gas-Fired, Steel Gravity Furnace

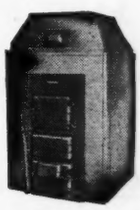


Series H
Gas-Fired, Utility Steel Air Conditioning Unit

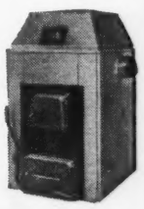
Series CA
Gas-Fired, Cast Iron Air Conditioning Unit

Series O
Oil-Fired, Steel Air Conditioning Unit

Series VH
Oil-Fired, Steel Utility Air Conditioning Unit



Series 780
Coal-Fired, Steel Gravity Furnace



Series C
Coal-Fired, Cast Gravity Furnace

THE C·A·OLSEN MANUFACTURING COMPANY

Luxaire HEATING & AIR CONDITIONING UNITS

ELYRIA 12, OHIO

fueloil & oil heat

New Products

Oilux Heating Line Now In Production

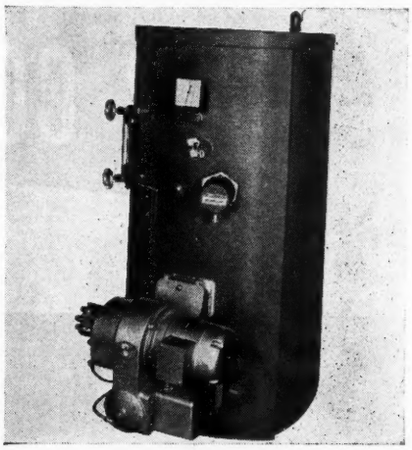
PRODUCTION has begun and deliveries are being made on a complete line of heating equipment for all fuels, it is announced by the Oilux Co., Fort Wayne 4, Ind. Oilburning units include two high-boy models of 65,000 and 80,000 Btu capacity, fired with Breese and pressure type burners. Both are forced air models, complete with filters and humidifiers. Large models, ranging in capacity from 100,000 to 400,000 Btu, are fired with Oilux pressure burners, or are available without firing equipment.

Three oilburners provide capacities from 8/10 to 15 gph and nine models comprise a line of oilfired boilers. Capacities of the tubular design boilers begin at 275 sq. ft. of steam, 440 sq. ft. hot water and reach a maximum of 1350 sq. ft. steam, 2160 sq. ft. hot water radiation. Boilers are offered with or without gun type olburners, and when burners are furnished three standard controls for either hot water or steam systems are included.

Condensate return systems for boilers also are manufactured by Oilux for 2,000 to 12,000 sq. ft. E.D.R. installations.

HomEase Model R Boilers For Small Home Heating

ADDITION of a line of unit boilers, known as Model "R," has been announced by HomEase Products Co., Paterson 3, N. J. Five sizes are designed



especially for small home use and are offered in sizes for 320, 400, 551, 700 and 900 sq. ft. of steam radiation.

Fired with a specially built HomEase gun type oilburner, equipped with the Flame-izer for flame shape control, the units feature a built-in light weight cast refractory brack combustion chamber. Water level gauge and controls are placed to be accessible and a built-in water heater furnishes domestic hot water. Model "R" unit boilers are offered as low in price and easy to install.

Oran Oil Floor Furnace With Cold Air Return

AN OILBURNING floor furnace, manufactured by Oran Co., Columbus, Ohio, features an auxiliary cold air return duct system, drawing cold air from remote corners of the area being heated. The use of Armco aluminized steel, an air tight welded combustion chamber and heat exchanger are represented as contributing to improved heating efficiency.

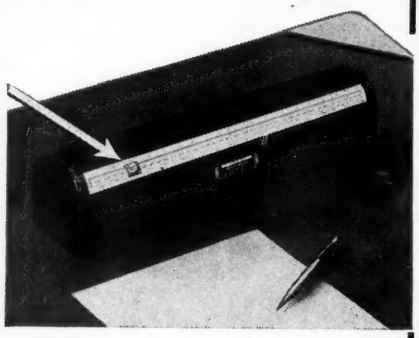
Commercial Standard rating of the new furnace is 50,000 Btu, at 30 cc. per minute oil flow. The entire combustion chamber and heat exchanger may be lifted out as one unit for easy servicing and the auxiliary cold air return duct system and thermostatic controls

Sensational

DEGREE DAY DISPATCHER

SETS UP THE NEXT FUEL OIL DELIVERY "INSTANTLY"

One Flip of the "FINDER" and the exact total Degree Days at which the next delivery should be made appears magnified on the dial.



NO Dividing
Subtracting
Multiplying
Adding

OVER 55,000 PRE-CALCULATIONS DO IT AUTOMATICALLY

THE DEGREE DAY DISPATCHER SAVES UP TO 90% ON TIME

INCREASES THE SIZE OF DELIVERIES—
DECREASES THE NUMBER OF DELIVERIES—
NEEDS LITTLE OR NO TRAINING TO OPERATE—
INSURES ABSOLUTE ACCURACY—

$25.00 Complete with operating cartridge for single and multiple 275 gallon tank installations.

Clip and Mail today for FREE trial offer.

RUE MANUFACTURING CO., 1433 Melon St., Philadelphia 30, Pa.

Please send me D.D.D. for 10 Days FREE inspection and trial. Within that time I will remit $25.00 plus mailing charges or return the instrument postpaid.

NAME .....

STREET .....

CITY .....ZONE.....STATE.....

Now- **Draft-O-Stat**

BAROMETRIC DRAFT CONTROL
MODEL "B" — ALL STEEL CONSTRUCTION

IS AVAILABLE FOR ALL FLUE SIZES FROM 6" TO 12"!

Draft-O-Stat—for many years the standard barometric draft-control mechanism for boilers, furnaces, oil burners and stokers—is now available in the MODEL "B" for 6", 7", 8", 9", 10" and 12" flue-pipe sizes. Now you can replace all obsolete and inefficient draft controls with the newest development in precision combustion control for the small and medium-size heating plant—achieving a higher fuel economy than has heretofore been possible.

Barometer Draft Control at its Best

The MODEL "B" is the logical first choice of heating engineers, and many manufacturers specify it for use on their equipment. Welded steel construction, die stamped, and finished in red and black baked enamel with polished fittings, it is built for rugged, dependable service. It insures a steady, unchanging rate of draft or "vacuum" in the chimney—thus providing maximum utilization of furnace heat. It is quickly and easily installed, easily adjusted to any degree of sensitivity, and gives long-lasting, trouble-free service.

Features for Better Performance

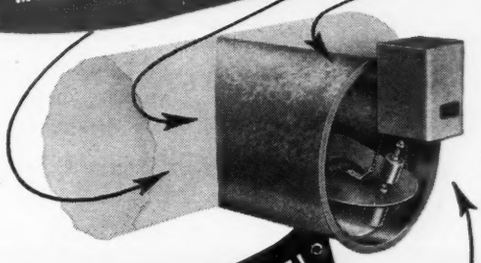
- *Exceptionally large Effective Area*
- *Precision Adjustment*
- *Feather-light Sensitivity*
- *Self-Cleaning Rocker Bearings*
- *Maximum Flexibility*

Insist on *Draft-O-Stat* for best results on every heating installation.

There's only **ONE** **Draft-O-Stat** *and* HOTSTREAM *makes it!*

THE HOTSTREAM HEATER CO.
6925 QUINCY AVE. • CLEVELAND 4, OHIO
Manufacturers of water heaters and draft controls

SAVES UP TO 30% ON FUEL OIL!
HOMES ENJOY ADEQUATE HEAT ON LESS FUEL!
MORE OIL AVAILABLE FOR NEW BURNER SALES!



EASY TO SELL—PROFITABLE!
HELPS OFFSET YOUR LOSS OF NEW BURNER SALES!

Amazing New **Sampsel**
SEQUENCE DRAFT CONTROL
for oil-fired furnaces and boilers!

Here's What It Does!

Based on the principles long used in industrial and commercial installations, the Sequence Draft Control increases heating plant efficiency and makes major fuel savings for homes. By preventing natural draft from cooling the heating plant, it greatly increases time between firing periods. "Stored" heat goes into the home instead of up the chimney.

Start Selling It Now

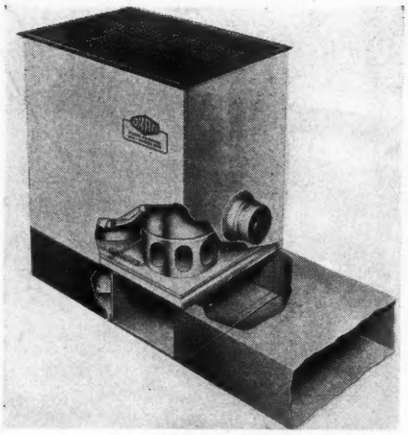
The Sequence Control is the greatest fuel-saving and sales-building idea offered oil burner dealers in years! It can stretch your customers' fuel oil supply up to 30% . . . in many cases that means complete freedom from worry about shortages. It makes more oil available for new burner sales. It's a real profit builder for you. Write for complete information today.

The Sampsel label on automatic heating controls is your guarantee of quality. Sampsel Controls assure best possible performance from the heating equipment you build or sell, for any fuel.

Sampsel
AUTOMATIC CONTROLS

Sampsel Time Control, Inc., Spring Valley, Illinois

fueloil & oil heat



may be included with the original installation or added later. The furnace requires a 24¼" x 36¼" floor opening.

Bacharach Airite Grille Velocity Meter

TO INDICATE air velocity at the face of supply or return air registers, or air movement in any open space, Bacharach Industrial Instrument Co., Pittsburgh 8, Pa., has introduced its Airite grille velocity meter. Air movement velocity is indicated directly in fpm on a calibrated scale by positioning the meter

squarely against the air flow. Range of the instrument is between 0 and 1,200 fpm.

The self-contained meter measures 3⅜" x 3⅜" x 1⅝" and is equipped with a detachable handle. A piece of ⅛" pipe may be screwed into the handle for use with high wall registers or ceiling outlets. Features include an 8"-long scale with 20 fpm divisions and a lock to retain scale readings. It is furnished complete with handle and case.

H. C. Little Offering Tri-Suredraft Chimney Top

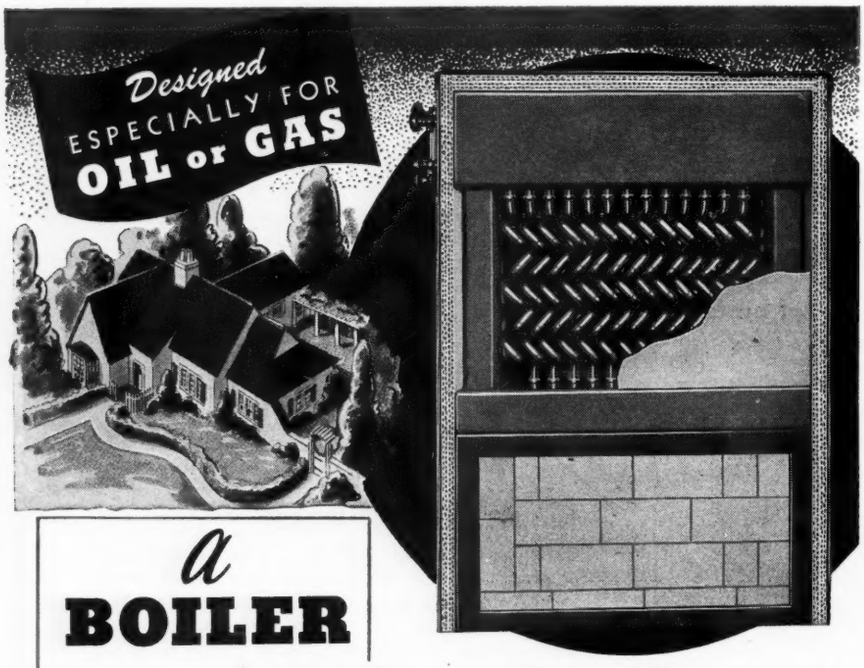
TRI-SUREDRAFT chimney tops, a product of H. C. Little Burner Co., San Rafael, Cal., are available in aluminum or galvanized steel in 6" and 8" sizes. The top fills a demand for a universal fitting to improve existing drafts and prevent down drafts, according to the manufacturer. It is designed so that any movement of air causes a positive draft in the chimney and because of the large openings in its tops, it continues to give draft in the chimney when there is no movement outside.

The tops are made in three piece construction to facilitate installation and are recommended also as ventilators.

Sterilator Germicidal Lamp Installed In Duct Work

THE STERILATOR, a germicidal lamp unit, designed for installation in the duct of warm air heating systems, is available for homes, industrial plants and commercial establishments. Developed by the Sterilator Div., Coleman-Pettersen Corp., Cleveland 14, Ohio, the lamp is said to kill almost all air borne bacteria, cold and infectious germs.

Equipped with a G-E germicidal



A BOILER that Amazes Home Owners!

The Bryan Copper Tube Boiler delivers service that is beyond the reasonable expectations of even the most particular home owner. A home owner wants and expects good, reliable service from his heating plant. The Bryan does more. Fast acting copper tubes deliver heat to radiators in record time and with astonishing fuel savings. You profit by delivering satisfaction plus.

The Bryan is compact, modern, and a cinch to install. Even the firebox lining on oil fired models is built in at the factory.

Send for Catalog

OIL FIRED MODEL

GAS FIRED MODEL

BRYAN STEAM CORPORATION, 188 Chili Pike, Peru, Indiana

BRYAN Copper Tube **BOILERS**

lamp, good for 4,000 hours of use, the unit utilizes the same germ killing ultraviolet rays employed in hospitals and similar institutions. The average 4 or 5 room home requires only a two 15 watt unit, 19" long. One installation in the duct systems makes the lamp effective in all rooms of the building.

Coleman Announces Oilfired Console Heater

A CONSOLE HEATER, announced by Coleman Co., Inc., Wichita 1, Kan., is a modern styled oilburning space heater, delivering 55,000 Btu/hr. The entire cabinet, measuring 34⅛" high, 37¾"

wide, 25" deep, is welded into a single piece of heavy gauge steel, and is furnished in two finishes, beige and brown. The heaters can be equipped with a power blower for direct air delivery at floor level.

Combustion chambers in the new heaters are long horizontal units, shaped like tear-drops to afford more surface for upward and forward radiation. Special dividers separate radiant and circulating heat zones. Louver sections in the front, back and floor aid air flow and increase the washing action of air on primary and secondary radiators. Other features are a removable 5-gal. tank, built-in humidifier, draft control, fuel control valve with an adjustable compensator to handle different grades of oil. Automatic room temperature controls are optional.

McDonnell No. 157 Control For High Pressure Boilers

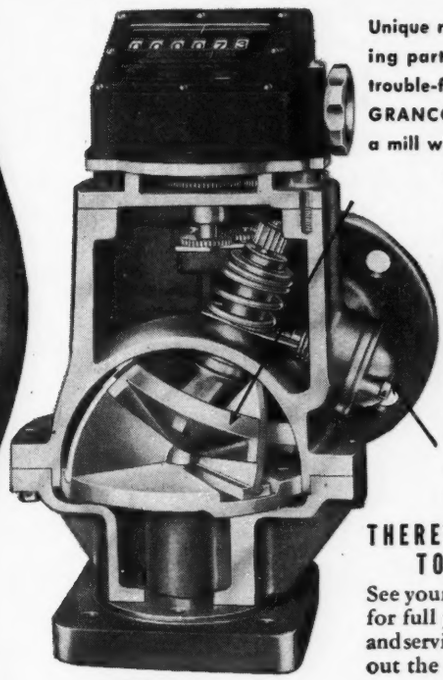
THE NEW NO. 157, announced by McDonnell & Miller, Inc., Chicago 11, Ill., is a combination water column type pump control, low water cut-off and low water alarm for boilers with pressures up to 150 lbs. It is the same control as the No. 150, but in water column

HOW TO MAKE UP YOUR MIND ABOUT METERS

Naturally, you want a meter so nearly perfect you can put it on the job and forget it. Here are the features an outstanding meter should give you:

TROUBLE-FREE OPERATION . . . . . ☑ Granco
FAST DELIVERY . . . . . ☑ Granco
GUARANTEED ACCURACY . . . . . ☑ Granco
LONG SERVICE . . . . . ☑ Granco
LOW INITIAL and MAINTENANCE COST . . ☑ Granco
ACCURATE PERFORMANCE at all VISCOSITIES ☑ Granco
QUICK, EASY CALIBRATION . . . . . ☑ Granco

ONLY GRANCO HAS THEM ALL!



Unique rotary action and fewer working parts give precise measurement, trouble-free operation and longer life. GRANCO Meter action is as simple as a mill wheel turning in a brook. Rotor turns directly in line of flow with friction-free "feather weight" action. No eccentric or reciprocating movements to interrupt the smooth flow of liquid, cause slippage or turbulence in the metering chamber. GRANCO Meters have an extremely low pressure drop. Easy, accurate calibration. Dial on outside of meter tells you how at first glance.

THERE'S A GRANCO METER TO FIT YOUR NEED

See your distributor, or write today for full particulars. GRANCO sales and service "at your service" throughout the nation.

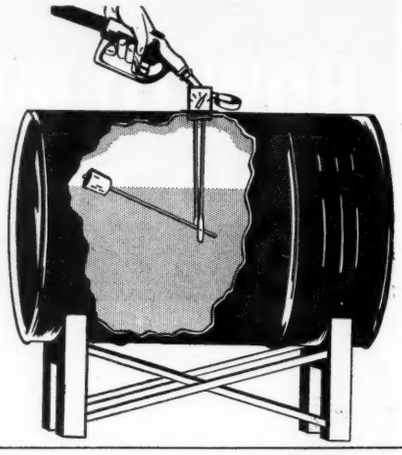
Granco

GRANBERG CORPORATION
Oakland 8, California

Also makers of Granco Rotary Positive Displacement Pumps

form, recommended for existing installations with water columns.

Removal of the old column and substitution of the No. 157 control results in an installation providing equalization in the float chamber, direct blow down and requiring practically no pipe. The control provides all three functions for which designed, or any combination.



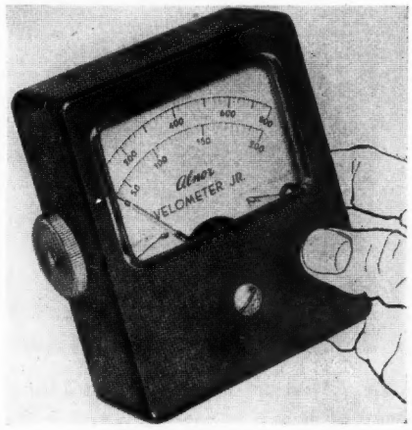
Fil-Thru Combines Drum Gauge, Vent, Fill Pipe

FOR USE ON 55 gallon drums, Applied Mechanics Co., Boston 10, Mass., has announced Fil-Thru gauge, consisting of a cork float which moves with the oil level and actuates a pointer to show the contents of the drum in quarters. It is installed by screwing into the opening, regardless of the amount of oil in the drum.

Fil-Thru is a combination gauge, vent and fill pipe. When filling the drum, the cover is lifted and replaced when full without removing the gauge at any time.

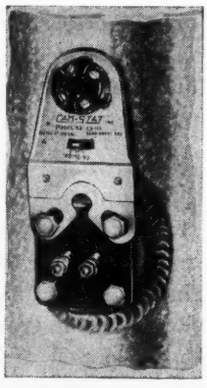
Velometer Jr. Is Direct Reading Air Meter

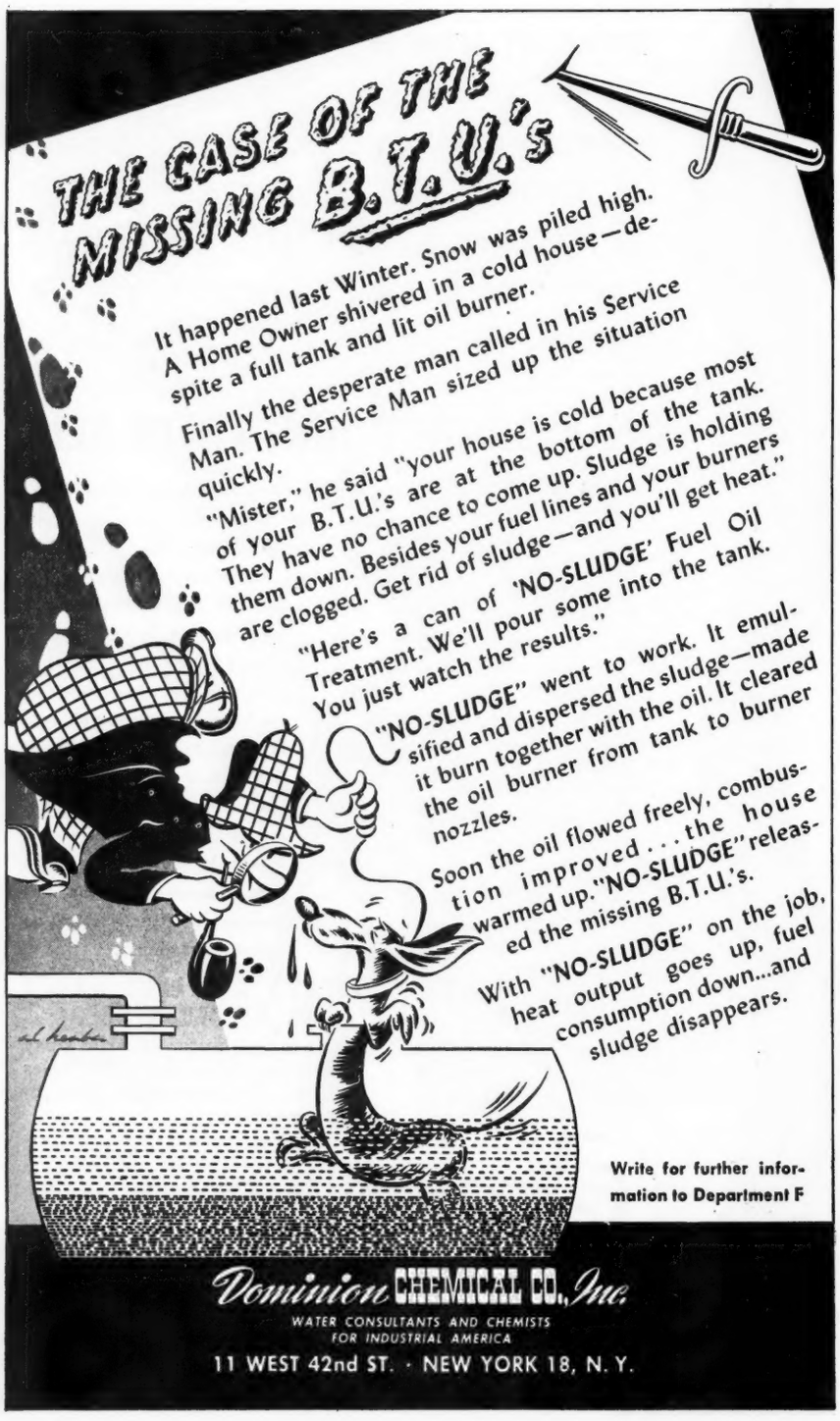
A NEW MINIATURE Alnor Velometer Jr., announced by Illinois Testing Laboratories, Chicago, is calibrated to provide direct reading of air velocity in fpm or mph, without timing or calculations. The completely self-contained meter weighs only 8 oz., has single or double velocity range scales and measures 4" high, 3" wide, 1½" deep.



Cam-Stat Mounting Bracket For Water Heater Control

A UNIVERSAL mounting bracket on model CD111 water heater control, developed by Cam-Stat, Inc., Los Angeles 34, Cal., designed to fit any water heater, is quickly attached to the unit by the top bolts of the heating element. Two diagonal slots in the base make it applicable for use with heating elements upon which the bolt circles may vary from 2" to 2¾" dia., while a third, center slot is used when the control is



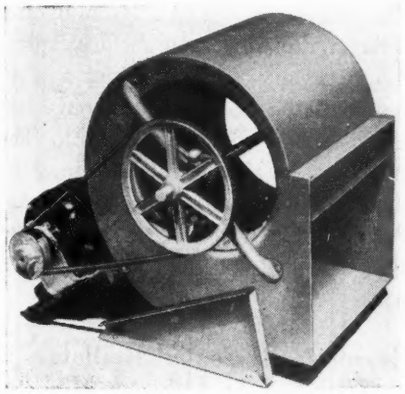

THE CASE OF THE MISSING B.T.U.'s
It happened last Winter. Snow was piled high. A Home Owner shivered in a cold house—despite a full tank and lit oil burner.
Finally the desperate man called in his Service Man. The Service Man sized up the situation quickly.
"Mister," he said "your house is cold because most of your B.T.U.'s are at the bottom of the tank. They have no chance to come up. Sludge is holding them down. Besides your fuel lines and your burners are clogged. Get rid of sludge—and you'll get heat."
"Here's a can of 'NO-SLUDGE' Fuel Oil Treatment. We'll pour some into the tank. You just watch the results."
"NO-SLUDGE" went to work. It emulsified and dispersed the sludge—made it burn together with the oil. It cleared the oil burner from tank to burner nozzles.
Soon the oil flowed freely, combustion improved . . . the house warmed up. "NO-SLUDGE" released the missing B.T.U.'s.
With "NO-SLUDGE" on the job, heat output goes up, fuel consumption down...and sludge disappears.
Write for further information to Department F
Dominion CHEMICAL CO., Inc.
WATER CONSULTANTS AND CHEMISTS FOR INDUSTRIAL AMERICA
11 WEST 42nd ST. · NEW YORK 18, N. Y.

attached to heating elements.

Model CD111 offers, in addition, such features as current carrying capacity of 3000 watts, 120-240 volts A.C., temperature ranges for primary and secondary controls from 60 to 90 degrees F., differentials of 10 degrees for primary thermostat and 25 degrees for secondary. The control has Underwriters' approval and has been tested successfully to NEMA standards.

Viking W-1110 Blower Unit For Small Size Furnaces

MODEL W-1110 blower assembly, designed by Viking Air Conditioning Corp., Cleveland 2, Ohio, is announced for furnaces used in smaller homes. The assembly has a capacity of 1,000 cfm at ½" to ⅝" static pressure, at reduced speed and with lower outlet velocity for quiet operation.



The unit's standardized outlet dimension permits interchangeability with conventional blowers of similar size. Models are available with horizontal, bottom horizontal or vertical discharge. Streamline bearings and large, accessible oil cups, holding a year's supply of lubricant, are standard equipment.

Sprouse Introduces 30 In. Air Mover

V. E. SPROUSE CO., INC., Columbus, Ind., announces a 30" air mover as an addition to its line of cooling and ventilating equipment. The new unit may be used in the home as an attic fan or ventilating fan installed in a window. It also is designed to meet ventilating and cooling requirements of business and industrial establishments, having a rated capacity of approximately 7,000 cfm.

The 30" model is powered with a ¼

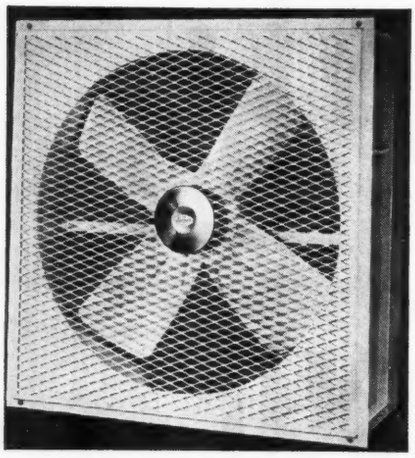
Paste this in Your Hat!

Only H.C.Little can offer your customers Home Heating with a Vaporizing Oil Burner that Lights itself and also burns Low Cost Catalytic Oils*

* Reports indicate that low cost furnace oil (including catalytic) will be in much better supply than No. 1 or Kerosene, this winter.

H.C.Little Burner Company
Dept. 8, San Rafael, Calif.

BRANCHES IN 18 PRINCIPAL CITIES

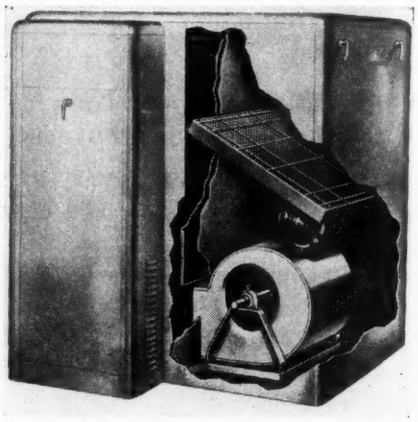


hp. motor and is furnished with an attractive grille. Overall dimensions are 36" square.

Hess Climate Master Units For Winter Air Conditioning

SERIES 1000 oilfired furnace units are available in standard and de luxe models from The Hess Co., Chicago, Ill. Four sizes are rated at 89,250, 102,000, 119,000 and 144,500 Btu/hr at the register, fired with burners equipped with nozzles of 1, 1.2, 1.35 and 1.65 gph capacities, respectively. All models are furnished with filters, blower, motor, oilburner, combustion chamber, thermostat and relay, combination blower and limit control, draft regulator and automatic humidifier. De luxe models are furnished with a vestibule to conceal the oilburner assembly. Either flange or floor-mounted burners are available.

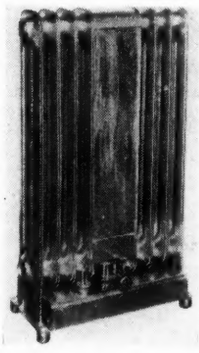
Units are designed with a square heat



transmitter to afford a maximum amount of direct, radiant heating surface. Square design permits the transmitter to conform with the cabinet, resulting in warm air chambers of uniform width. The unit provides all elements of winter air conditioning automatically and permits independent operation of the blower and filter assembly for summer air circulation.

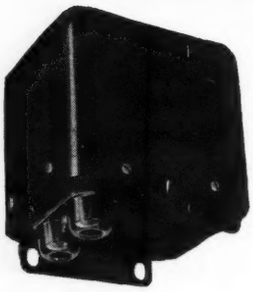
Hermetically-Sealed Radiator With Oil As Transfer Medium

A PATENTED METHOD of heating through the medium of hermetically-sealed oil is embodied in the line of radiators announced recently by Hurseal Co. of America, New York 17, N. Y. Models are available with electrical heating element, and also in non-electric types. The unit pictured is an oilfired model.



The sealed-in tube of oil, in place of water, eliminates the need for refilling and the use of air vents and valves. Thermostatic control is provided for the light pressed-steel radiators, which are filled with a low-expansion oil. Units are delivered ready for use and freely disperse heat, according to the manufac-

ANTICIPATE YOUR REQUIREMENTS!



PLACE YOUR ORDER NOW!

IT will be to your advantage to anticipate your requirements for Ignition Transformers because of the shortage that is developing in steel, copper and other basic materials used in their construction. Play safe by making your commitments without delay.

DONGAN ELECTRIC MFG. CO.
2981 Franklin Detroit 7, Mich.

The Dongan Line Since Nineteen-Nine

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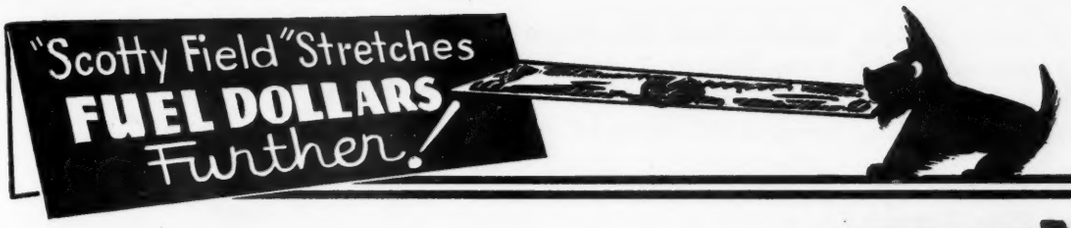
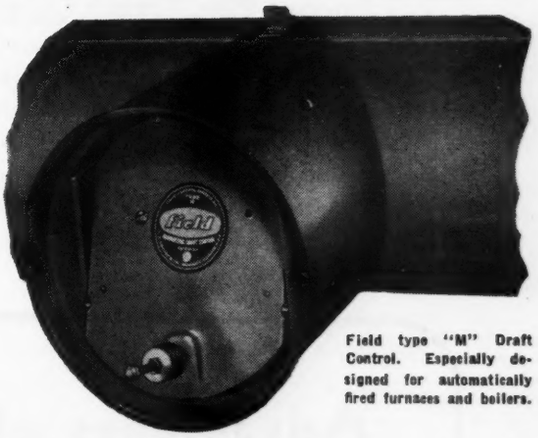
DONGAN TRANSFORMERS



These SAVINGS MEAN SALES . . .

Fuel economy and heat saving are important to today's home owner! Field automatic, barometric draft controls give fuel economy and save heat!

That's why dealers find it profitable and easy to sell the durable, efficient Field barometric draft control, "The Best for the Finest" in heating equipment.



Field type "M" Draft Control. Especially designed for automatically fired furnaces and boilers.

FIELD CONTROL DIVISION

H. D. CONKEY & COMPANY MENDOTA, ILLINOIS

AFFILIATES:
CONCO MATERIALS HANDLING DIVISION
CRANES—HOISTS

field REGISTERED
BAROMETRIC DRAFT CONTROLS

AFFILIATES:
CONCO BUILDING PRODUCTS, INC.
BRICK—TILE—STONE

There's an automatic **JOHNSON BURNER** *for every heating need . . . large or small . . . domestic, industrial or commercial. If you want high efficiency and enduring fuel economy install Johnson Burners.*

High efficiency "replacement" burners that really save oil.

JOHNSON *Pressure-Type, Automatic*

BANKHEAT BURNERS

Bankheat Burners are ideal for replacement installations. Few burners can match their proven record of economical operation or fuel-saving efficiency.

Bankheat Burners have everything that a home owner wants; dependability that has been time-tested in thousands and thousands of installations; quiet operation; carefree automatic controls; fine workmanship and engineered precision. All this . . . plus their outstanding ability to save oil.

Now is the time to go after replacement sales while oil saving is uppermost in so many minds. Bankheat Burners will make it easier to land these replacement jobs. Let us show you how many advantages they offer . . . and how their easy installation cuts down labor costs and increases your profit. A letter or 'phone call will bring you detailed information.

Builders of fine Oil Burner Equipment since 1903

Johnson Oil Burners

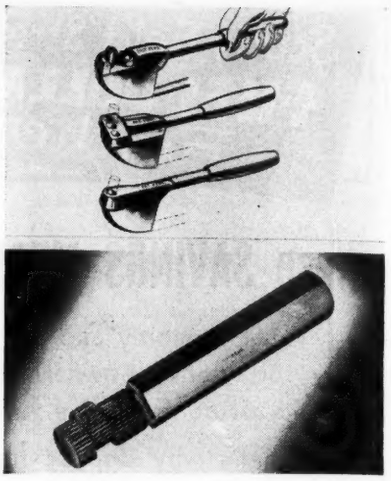
S. T. JOHNSON CO.
940 Arlington Ave., Oakland 8, Calif.
401 No. Broad St., Philadelphia 8, Pa.

turer, within fifteen to twenty minutes after being started. In operation the radiator provides a temperature rise to a low surface temperature of 160° F.

Keiner Adds Tube Benders, Internal Pipe Wrench

A LINE OF TUBE BENDERS has been announced by its distributors, Keiner Machine Products, Los Angeles 33, Calif. Bobs Tu-Benders comprise three different tools, to be available singly or as a set. The first is designed to accommodate 3/8", 7/16" and 1/2" O.D. tubing; the second, a handy hip pocket or kit tool to accommodate 7/16" or 3/4" tubing. The third tool is a latch bender for flared tubing of 1/2", 5/8" or 7/8" sizes.

The second item announced and for which Keiner is national distributor, is the Roddick internal pipe wrench. It is constructed of tool steel in sizes for 1/2" and 3/4" pipe and works on an eccentric action which grips firmly the inside of nipples and pipe. Action takes place in any position and either direction. When inserted, the center serrated section swings cam-like to engage the inside of



the walls. The wrench then can be turned in either direction by a crescent or monkey wrench. The Roddick for 1/2" pipe is 4" long; for 3/4", 2 1/4" long.

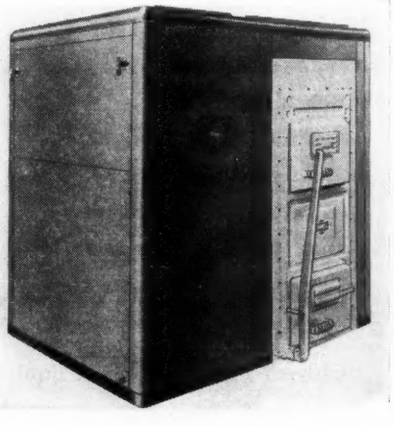
Remco 1/2" Valve For Basement Oil Tanks

REMCO TANK VALVES, offered by R. E. Michel Co., Baltimore 2, Md., fit into the 1/2" tapping in the bottom end of 275 gal. basement fueloil storage tanks, and have built into the valves copper tube fittings as integral parts. Forged construction is used in two available sizes: 1/2" M.P.T. x 3/8" and 1/2" M.P.T. x 1/2" O.D. copper tubing.

Stokol Announces "Multi-fuel" Furnace

A LINE of winter air conditioners, available from Stokol Stoker Co., Indianapolis, Ind., are "multi-fuel" furnaces, designed to operate either handfired, or with stokers, gas or oilburners. Available in sizes from 105,000 to 172,000 Btu/hr. with forced circulation, gravity models also can be furnished, rated from 88,150 to 154,200 Btu/hr. at the bonnet.

The unit is furnished complete with slow speed centrifugal blower, heavy duty motor, variable speed drive and



Advantages of Buying ALL FROM ONE Responsible Concern

For more than twenty years R & I have specialized in the manufacture of products which assure satisfaction. You reduce telephone, postage, stenographic and bookkeeping time and costs when you get R & I all from one supply house.

R & I Stic-tite Insulating Cement for covering boilers, tanks, fittings, etc.

R & I Hearth Cement for pouring special shapes, hearths, rotary burners and floors of chambers.

R & I #3000 Refractory Cement for patching.

R & I Combustion Chambers for any job from 1.25 to 2.50 gals. oil per hour.

R & I Insul-fil Rockwool Insulation for packing between combustion chamber and cast-iron base.

R & I Black Furnace Cement for sealing metal joints and sections of boilers exposed to heat.

Write us for Bulletin OB-99.

Your supply house has these R & I products.

REFRACTORY & INSULATION CORP.

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BURN *Any Type Oil* IN THE ACE UNIFLOW BURNER

—Patented Uniflow Oil Valve Assures Uniform Flow and Flame

Regardless of changes in oil temperature or viscosity, the Ace Uniflow Valve permits a constant uniform flow and flame as desired. Heavy residual fuel oils may be burned efficiently under all operating conditions. No matter whether the oil is light or heavy—kerosene or bunker "C"—whether the temperature is 32° F or 180° F, the correct proportioning never varies.

This is just one big feature of the popular Ace Uniflow Oil Burner, custom-made for particular heating requirements.

Send for complete details today.

Capacity Ranges

	GALLONS PER HOUR	BOILER H.P.	SQUARE FEET STEAM RAD.	SQUARE FEET WATER RAD.
MINIMUM	4	12	1,600	2,600
MAXIMUM	165	500	64,000	104,000

Ace UNIFLOW OIL BURNERS

ACE ENGINEERING CO.

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Custom Engineered Oil Burning Systems Since 1931

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NO need to get all hot and bothered in finding out where to buy something, especially items you need only occasionally. The BUYER'S GUIDE, directory of your industry, tells you where to buy anything oilheating men need. It's thoroughly cross referenced. Quickly and easily you can find out where to buy anything you use. If you're puzzled about such things as a diaphragm, a mixing valve, a heating coil, quick connectors for hose couplings, vent caps, vitrified clay pipes or rust solvents, the BUYER'S GUIDE has an answer for you about these and hundreds of items you require regularly.

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Please send check, money order or cash with order to avoid bookkeeping on the thousands of small orders we must handle to service the field.

IT'S THE DIRECTORY of the OILHEATING INDUSTRY

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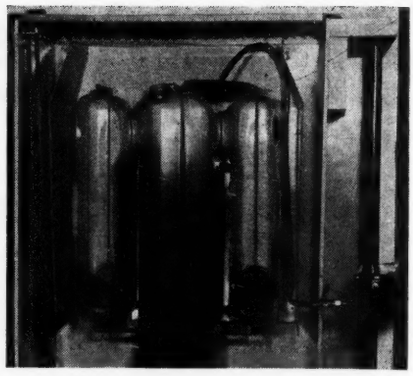
filters. Blower assemblies can be installed on either side of the cabinet. Design of the unit is reported to facilitate changeover from one fuel to another even after installation.

Hot Spray Humidifiers For All Types of Systems

HOT SPRAY humidifiers, marketed by Merchandising Associates, Pueblo, Colo., can be installed in all types of warm air systems, ranging from centrally installed furnaces to floor and ceiling suspended furnaces. All copper and brass construction eliminates corrosion and rust in the unit, which contains a water supply tank with automatic float valve. Water enters the tank, passes into an expansion chamber, where steam is generated. The steam is discharged through a copper tubing into the air stream from the furnace or heater. A copper pan catches the minute quantity of water ejected from the tube when heat is cut off and cooling starts.

The illustration shows an installation in a floor furnace, which required the drilling of one ⅜" hole through the outside casing and cold air shield, a ¼" hole in the water line to mount a saddle valve and cutting ⅜" and ¼" copper tubing to required lengths.



MORE FILTER AREA with

EDCO Fuel Oil Filter

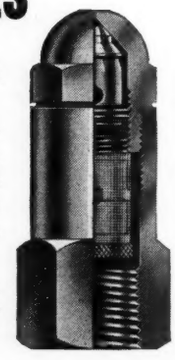
S-252

Sell your customers this inexpensive insurance against costly interruption of service. The exceedingly large filter area in the newly designed EDCO Filter S-252 gives maximum protection to oil burners, space heaters and water heaters using No. 1, 2 or 3 fuel oils. In addition to more filter area, this new filter features *longer cartridge life, sturdy construction, large sump.* It's light in weight to reduce shipping costs and is interchangeable with other makes.

Individually boxed, 24 and 48 to a case.

EDCO Triple-Tested NOZZLES

tops in QUALITY, UNIFORMITY, PERFORMANCE



When you want the best, specify EDCO NOZZLES. They are made of the best grade stainless steel, tested for spray angle, atomization and actual rated capacity, and designed to stay clean longer. Large capacity Monel strainers protect the orifice and slots from plugging.
EDCO NOZZLES are now packaged for safety, convenience and storage. Keep an adequate supply on hand. . . . Order today.

Please give complete information about capacity, spray angle, quantity, etc.

EDDINGTON METAL SPECIALTY CO.

P. O. BOX K, EDDINGTON, PENNA.

Fuel Unit Tester Redesigned by OEM

CHANGES in the design of its portable fuel unit tester were made recently by Oil Equipment Mfg. Corp., New Haven 6, Conn. The unit makes possible testing and repairing of many types of pumps, valves and fuel units, and is furnished complete with pump flanges, shaft coupling adaptors and a condensed fuel unit and pump parts catalog. The tester consists of an oil reservoir, equipped with a motor to drive pumps being tested. It permits a hook-up, complete with feed and return lines and discharge through an ordinary atomizing nozzle. Pressure and vacuum readings are obtained from built-in gauges while the pump is operating under simulated field conditions.

OEM also has available a duplex slip-thru tank bushing which enables the suction and return tubing lines to be installed in the same tank openings. Two sizes are offered, each 2" in diameter, one to accommodate two lines of ⅜" O.D. tubing, the other for ½" O.D. tubing.

Lamneck Simplenic System Of Prefabricated Ducts

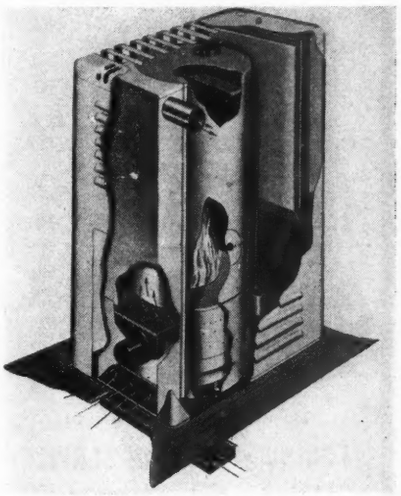
THE LAMNECK Simplenic system of prefabricated ducts and fittings for forced air heating systems, recently announced by its manufacturer, Clayton & Lambert Mfg. Co., Louisville, Ky., simplifies stocking, both as to space and investment of money. In the system, the duct extending from the plenum is the same size its full length, requiring no increasers or reducers. To determine duct sizes, C & L presents a simple for-

mula—multiply the required number of openings by two and add the number two.

Standard Simplenic duct is 8" deep and the system is the result of studies and research development by the National Warm Air Heating and Air Conditioning Association.

Gilcor Heater For Trailer Or Cabin Use

A HEATER, designed for house trailers and tourist cabins, now is being manufactured by Gilcor Products Corp., Dowagiac, Mich. The heater is a miniature furnace, with large capacity blower, rubber-mounted for quiet operation. Constructed of twenty gauge steel throughout, the heater is designed so that it can be installed with a warm air distribution and cold air return duct

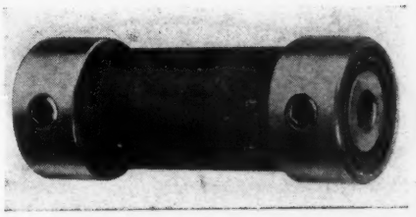


system, in addition to the radiant heat provided by the unit. If no duct system is used, warm air is circulated by the blower and an air duct running the full length of the combustion chamber. Make-up air is drawn from the outside.

Units measure 12¼" wide, 19½" deep and 40" high. Standard finish is brown hammerloid baked enamel, but other colors and finishes can be furnished to match trailer interiors.

Wheelco Flame-otrol Improved In Design

TWO IMPROVEMENTS, incorporated to provide increased safety, have been added to Flame-otrol combustion safeguard systems, made by Wheelco Instruments Co., Chicago 7, Ill. A safe start relay, mounted on the chassis of the instrument, prevents operation in the event of any unsafe condition during the start-up period. Secondly, the Flame-Eye, sensing unit of the control for oilfired equipment, now is equipped with a blue sensitive photo cell, which responds only to blue spectral rays, common to oil flames.

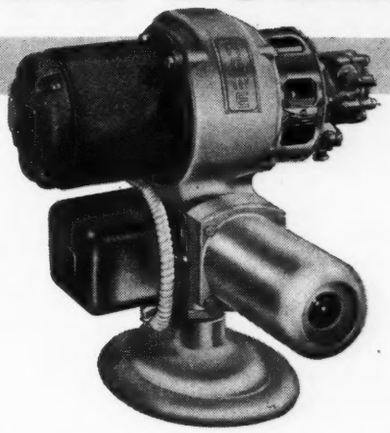


Climax Flexible Couplings For ¼ Horsepower Motors

TYPE H flexible couplings, made by Climax Flexible Coupling Co., Cleveland 10, Ohio, are designed for all direct-connected ¼ hp electric motor drives. The one-piece couplings are made of heavy duty rubber and fabric hose, with plated steel bodies. Socket set screws are furnished, and couplings of extra length and large bore are available.

Four standard sizes have diameters of 1 3/16", lengths of 2½", 3", 3½"

ACME DEALERS
praise the operation of the
ACME BURNER



GET THE BENEFIT OF 18 YEARS EXPERIENCE

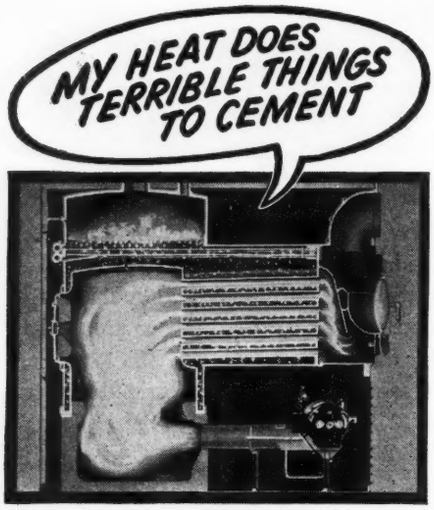
★ Have you investigated the Acme line? It includes a complete range of burners from ½ to 20 g.p.h.

Acme features the famous one piece Turbostat Head which gives high CO_2 with minimum of adjustment. Interesting territories are open. Our representative will be glad to talk over your requirements.

ACME

GET THE BENEFIT OF 18 YEARS EXPERIENCE

ACME HEAT & POWER, INC.
318 TEN EYCK STREET
BROOKLYN 6, NEW YORK



When you seal combustion chambers with Rutland Retort Cement, you can depend on them to stay fire-tight.

Rutland Retort Cement is ideally suited for bonding fire-brick. Soft enough to work easily, but has enough body to be efficient. Economical to use, because it has more bulk than many other cements.

4 Other Rutland Products That Save Time and Trouble

Rutland Furnace Cement—**For making joints smoke-tight and gas-tight when installing or resetting of air furnaces and oil burning equipment. Provides 10 to 15% more bulk than many cements and does not fall or crumble as metal heats and cools.**

Rutland Asphalt Paint—**Genuine Gilsonite Asphalt base. Easy to apply. High heat-resisting qualities. Drys in about 4 hours.**

Rutland Pipe Joint Cement—**Seals joints tightly. Lasts indefinitely. Never becomes so hard that pipes cannot be disjoined easily.**

Rutland Concrete Patcher—**For repairing cellar walls and floors. Easy to use; just mix with water.**

FREE **Booklets Every Heating Expert Should Have—Clip Coupon Today**

RUTLAND FIRE CLAY CO. FO-4
RUTLAND, VT.

Please send—free—your booklets on Rutland products for the heating expert.

Firm name.....

Street.....

City.....

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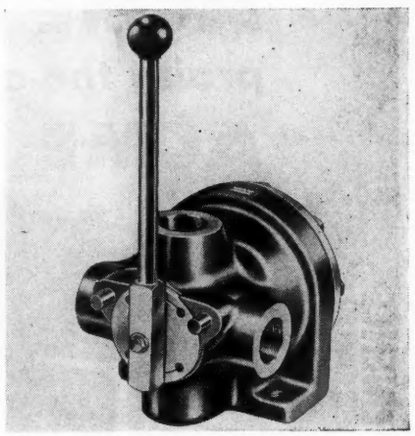
and 4". Stock bores measure ¼", 5/16", ⅜", 7/16" and ½".

Crane Pipe Joint Compound Packed In 4 Tube Sizes

PLASTIC LEAD SEAL NO. 2, pipe joint compound made by Crane Packing Co., Chicago 13, Ill., now is packaged in 1, 2, 4 and 8 oz. tubes. Brushed on threads, gaskets, flanges, studs, bolts and plugs, the compound stops galling or rust of threads, without hardening or drying out. It is insoluble, does not wash out and is effective at temperatures up to 500° F.

Saval Four Way Valve For 1½" Pipe Sizes

A FOUR WAY SELECTOR VALVE, produced by Saval Co., Los Angeles 11, Cal., fea-



tures low handle load, ball bearing construction and rugged stops and balanced detents for all three operating positions. Designed for corrosion-resistant service with water, gas or oil, the valve has a forged steel body and employs a patented principle, providing a metal-to-metal seal. The valve has only one moving part, may be serviced without removing from the lines and requires no lubrication or packing. Modifications are offered to meet special requirements.

Hanson-Gates Boiler Unit Requires Minimum of Space

AN OILFIRED boiler-burner unit, available from Hanson-Gates Mfg. Co., Reading, Mass., is a compact model, designed for installation in small homes, garages and similar locations where space is at a premium. The unit measures only 14" wide, 16" deep and 41" high, rated up to 350 sq. ft. standing hot water radiation, 80,000 Btu/hr output. A gun type oilburner, with ¾ gph nozzle, fires the boiler, which is delivered with a 9 x

KRAISSL

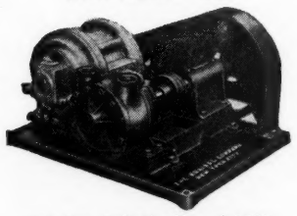
PUMPS AND SEPARATORS

FOR OIL BURNER SERVICE

CLASS 50 LIGHT OIL PUMPS
DIRECT DRIVE FOR
#1 TO #5 OILS INCLUSIVE

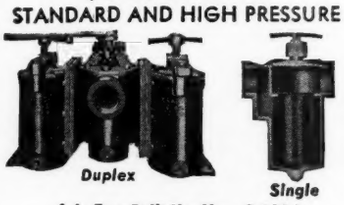
Ask For Bulletin A-1330

CLASS 60 HEAVY OIL PUMPS
REDUCTION DRIVE
FOR HEAVY OIL



Ask For Bulletin No. A-1193

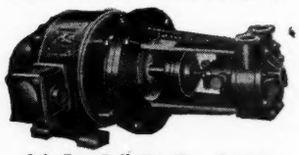
CLASS 72 STRAINERS AND FILTERS
SINGLE AND DUPLEX
QUICK CLEANING
STANDARD AND HIGH PRESSURE



Ask For Bulletin No. A-1214

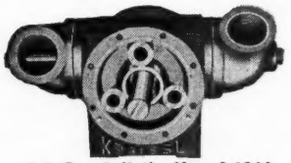
FOR BULK STATION SERVICE

CLASS 60M MOTORED PUMPS
DIRECT DRIVE
FOR EXCLUSIVE USE WITH
LIGHT OILS AND SOLVENTS



Ask For Bulletin No. A-1267

CLASS 80 TRI-ROL PUMPS
INTERCHANGEABLE SERVICE
BOTH LIGHT AND HEAVY OILS
TANK TRUCK AND BULK STATION



Ask For Bulletin No. A-1366

295 WILLIAMS AVE.

KRAISSL **THE KRAISSL COMPANY**
HACKENSACK, N. J.

Imagine— a shower in the coal bin!

Imagination is helping sell

Nu-Way OIL BURNERS

THE Nu-Way TO ADD A NEW ROOM IN YOUR HOME!

Imagine coming in from fishing or golf—from ironing or gardening—and jumping into a "king-size" shower right where the coal bin used to be. It's all possible when you convert to clean, comfortable and convenient automatic oil heat the Nu-Way. Besides the useable space you gain, your Nu-Way Oil Burner gives greater fuel economy, quieter operation and greater dependability . . . and 9 features for better heating. Nu-Way Oil Burners are sold through your local heating contractor.

FREE! NEW BOOK

"What to Expect When You Convert to a Nu-Way Oil Burner"

—Is which your questions pertaining to oil heat for homes are fully and clearly answered. Write: Nu-Way Corp., Dept. B-1, Rock Island, Illinois.

CONVERT WITH A Nu-Way OIL BURNER

"Automatic Oil Heat Exclusively Since 1921"

NU-WAY CORPORATION ROCK ISLAND, ILLINOIS

Yes, IMAGINATION is playing an important part in the Nu-Way national advertising campaign to help sell Nu-Way Oil Burners. The advertisement shown here is one of the series picturing the cleaner, roomier basements made possible through the installation of Nu-Way Oil Burners . . . and the different ways in which this extra space can be utilized. Millions of home owners will read about the quality construction and special features of Nu-Way Oil Burners. And every Nu-Way advertisement directs prospects to the "Local Heating Contractor". Besides national magazine advertising, Nu-Way Oil Burners are backed up by folders, mailing pieces and other hard-hitting and timely sales promotional aids.

Consistent Advertising IN THESE NATIONAL CONSUMER MAGAZINES

The millions of readers of BETTER HOMES AND GARDENS, AMERICAN HOME, HOUSE & GARDEN and HOUSE BEAUTIFUL—many of them potential buyers of Nu-Way Oil Burners — will see Nu-Way advertising. They will look to their "Local Heating Contractor" to supply them. Write today for new folder containing complete details on Nu-Way Oil Burners.

Nu-Way OIL HEATING EQUIPMENT

Nu-Way CORPORATION

ROCK ISLAND, ILLINOIS

Sold only through jobbers. Also special application for furnace and boiler manufacturers.

Automatic Heat Exclusively Since 1921

Another

TUTHILL FUELSTAT

Feature That Makes Servicing Simple

The FILTER is accessible at top, making replacement easy without spilling fuel oil

Get details on this and other Tuthill Fuelstat features in the **Model 3OEN** bulletin.

TUTHILL PUMP COMPANY, 939 East 95th Street Chicago 19, Illinois

9½ x 11 built-in combustion chamber. It is suitable for use with a circulator and on radiant heat installations. An indirect water heater can be used for domestic hot water.

Boiler is equipped with a heavy duty triple coil, using 54 ft. of 1" copper tubing, holding approximately 2 gals. of water, and baffled for maximum heat absorption. A 6" flue opening, 1¼" connections for flow and return are provided. The black and red enamelled cabinet is blanketed with a 1" covering of JM insulation.

Viking Twin Unit Pump For Petroleum Bulk Plants

A TWIN-UNIT PUMP, in production by Viking Pump Co., Cedar Falls, Ia., is made especially for use by petroleum bulk stations. It is designed to pump two similar petroleum products quickly and safely and has been Underwriters' approved for use in inside or outside locations.

The pumps employ Viking gear-within-a-gear principle and may be used separately or in unison, each pump delivering 100 gpm. The unit can be used outside a pump house and is reported to be weather, dust, water and explosion-proof.

DEALERS
DISTRIBUTORS

Another Klemm Filter Triumph

FOR

First In Precision!

First In Engineering!

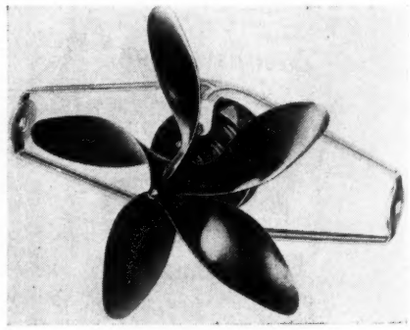
Watch
For KLEMM In
SEPTEMBER

Fireye Photoelecrtic Combustion Safeguard

SCANNER TYPE 45PH5 photoelectric device, introduced by Combustion Control Corp., Cambridge 42, Mass., provides for instantaneous burner shutdown in case of oilburner flame failure. It is used with control type 24QJ5 to provide operating protection and with programmer type 24PJ8 if starting protection and automatic ignition are required. The scanner consists of phototube and vacuum tube amplifier, mounted to have a clear view of the oil flame. Control's optical system incorporates a heat-absorbing filter and a hinged shutter to permit lens cleaning without burner shut-down.

Roto-Beam Air Circulator Made With Bakelite Blades

A VENTILATING UNIT, available from Roto-Beam, Chicago 39, Ill., features propeller blades molded in one piece of bakelite under 10,500 lbs. pressure. The



design of the blade, plus the acoustical characteristics of the bakelite, make it particularly quiet operating. Full surface of five blades is utilized from center to tip to impel the air in two beams, moving at different speeds. Differential pressure between the air beams causes a pulsating, radiant movement of air duplicating natural movement of outdoor air. The unit's efficiency is advanced as permitting the use of lighter, smaller and less expensive motors to move the same amount of air.

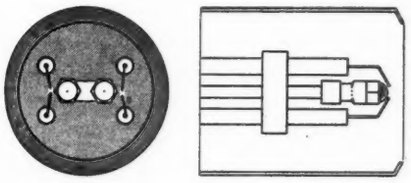
The propeller blade, with set screw, is announced also as being available to manufacturers of heating and ventilating equipment necessitating air transfer. Unit is furnished with standard 110 volt AC motor, but can be supplied for DC operation and in other voltages.

Everyday Snags

Double Ignition

Several pressure burner manufacturers feature double ignition on their largest models. Two sets of spark electrodes and high tension leads are used. One ignition transformer of special design may be used, or two separate transformers of standard design.

Increased security against breakdowns is the objective of using double ignition, for ignition failure is an important cause of trouble and the probability of two ignition systems failing at the same time between service men's check-ups is greatly less than the probability of failure of a single ignition system. The



Commercial size pressure burner is fitted with two nozzles and two ignition systems.... continuous.

double-ignition burner should perform dependably, of course, with either of its two sparks working. From time to time, a service man should check on each ignition system separately, to make certain that if one fails before he visits the burner again there will be no service call.

Knowing these things and being especially anxious to avoid expensive service calls from an 8.0 gph installation he was making some 80 miles from his office, a certain experienced burner dealer decided to rig a 10 gph single-ignition burner for double ignition.

Altering the parts somewhat so they would fit neatly into the gun tube without reducing appreciably the air flow through it, he simply used two, instead of one, of the electrode holders usually used in the particular burner model. Installing two electrodes on each side of the oil tube to the nozzle, he provided a spark on each side of the oil spray. He declares he found it easy to add a second ignition transformer to the burner in a way so neat the transformer appears factory-applied.

For maximum dependability, the dealer explains, in this case he wired the burner for constant ignition.

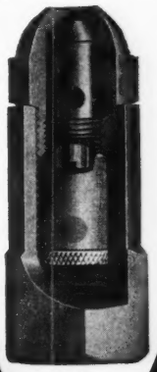
Firing 8.0 gph, the burner sprays oil from two side-by-side 4.0 gph nozzles mounted in a standard twin-nozzle adapter. Acquainted with the argument that the tight plugging of one nozzle in a twin adapter, occurring with the burner in operation, may cause the flame to go out while oil continues spraying from the other nozzle, the dealer points out that to begin with this won't happen with continuous, separate ignition for each of the two nozzles. To top it off, he tested for safety by firing just one of the 4.0 gph nozzles and cutting off the spark. Thanks to a proper-size firebox with high side walls and a decided corbel or step-in design for its high back wall, he says, on this job the flame from one 4.0 gph nozzle remains lighted after the spark is cut off.

Any dealer altering a burner in any way before installing it should check with the manufacturer of the burner. In this case, the dealer obtained factory approval of the manner in which he altered the burner. The factory made one important suggestion. Use a different kind of high tension wire for each of

TAKE A MONARCH "TIP"-- AND COMPARE RESULTS!

Most any nozzle will produce some kind of a fire, but —until you have tried Monarch Stainless Steel Nozzles (of a type with spray characteristics matched to your air mixing equipment) you won't know how good they really should be. State make of burner and sketch or accurately describe air mixing head and make test *yourself* with the series Monarch Nozzles we recommend.

Pulsation: We can usually suggest a remedy. Give full details of burner and the job.



F-80

Air Cones & Stabilizers

Monarch combinations have been used as original equipment by burner manufacturers for many years and dealers have used thousands of them to make old burners more efficient. Eliminate guesswork—Use tried and tested equipment and be sure of *results.*
Now available for 3½", 3⅞", 4" 4¼", 4½", 4¾", 6" and 8" I.D. air tubes.

Replacement Valves

Monarch piston type pressure regulating and cut-off valves are available in models to suit most replacement needs. G-49 valves can be mounted in any position and piston will not jam from dirt. Contain no bellows or diaphragm to break or corrode.

Write for Catalog D

MONARCH MFG. WORKS, INC.
2503 E. ONTARIO ST.
PHILADELPHIA 34 PENNA.

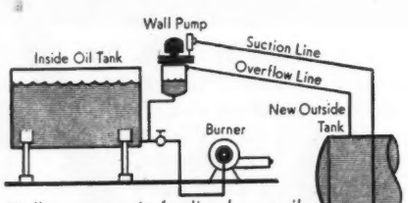
European Distributor: A. Coutau, Rue de la Scie No. 16, Geneva, Switzerland

the two ignition systems, it recommended, so that a service man who has removed the gun tube assembly will be certain to connect one ignition transformer to provide the spark on one side while the other transformer provides the spark on the other side.

* * *

Wall Pump Feeds Inside Tank

An inside 275-gallon oil tank usually is removed when a burner owner buys an outside tank to be able to store more oil. But in this case the burner owner, the chief engineer of a factory boiler plant, insisted on using both his old inside tank and his new 1,000-gallon outside tank. This would save the upset and expense of taking out the basement tank, he pointed out, and would continue to give the burner fueloil at basement temperature instead of colder oil from outside. Using preheated heavy oils in his power boilers, he placed inordinate importance on heating slightly the light oil he used at home. Besides, he argued finally, he wanted to be able to use the 1,275 gallons of oil stored in both tanks, and of course he wanted fully automatic use of both tanks.



Wall pump permits feeding burner oil from old inside tank and new outside tank

To provide the advantages the owner insisted on having, the burner dealer who had sold him the outside tank finally installed an automatic wall pump at some considerable extra charge, piped to keep the 275-gallon tank full of oil from the outside tank. The oil level of the wall pump is 3" below the top of the inside tank. Starting with both tanks full, the burner simply takes oil from the inside tank. When the oil level in this tank drops an inch, the wall pump starts and fills the inside tank again. The outside tank will run out of oil while the inside tank is full; then the wall pump float switch will go to its out-of-oil position and keep the pump idle, but the burner will continue to heat the house until the inside tank goes dry. When the oil truck driver is informed or finds out the outside tank is dry, he should fill the inside tank to save work for the wall pump and to wind up his delivery with both tanks full.

To prevent overly long "on" periods for the motor of the wall pump under any conditions (just after this pump stops getting oil from the outside tank, for example), the wall pump is wired to receive electricity from the oilburner motor circuit. Thus the wall pump cannot run except when the burner is running.

Although somewhat expensive, this two-tank layout serves well and is extremely interesting since it provides some special features related to the automatic control over the level of oil in the inside tank. Filling only the outside tank after it has gone dry, for example, and failing to fill a halfful inside tank, causes the wall pump motor to run off and on with the burner motor for days until finally the inside tank is full. Then the wall pump runs only a fraction of the time that the oilburner motor runs, since the wall pump handles oil at many times the rate at which the burner uses oil.

* * *

Cause of Rusty Hot Water

The hot water tank in a six-room house is heated during the winter by a casting located over the fire of the house-heating warm air furnace, which is equipped with a gun burner.

After using the layout a few months, the owner complained of noises in the hot water pipes and spells of rusty water. After the plumber who had planned the arrangement refused to improve it, the owner turned to his fueloil supplier for help.

An oil company heating expert found a good over-fire water heating casting installed nicely in the furnace. But connected to this were the two long horizontal circulating lines the upper diagram shows. Heat from the oil flame played mostly on the bottom of the over-fire casting. As a result, starting the burner while no hot water was being drawn caused the reverse circulation shown by the curved arrows in the upper drawing. The tank became warm as extremely hot water flowed into its bottom connection, but 20-minutes of

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Will Keep Your Customers Warm and Care-free This Winter

Listed by Underwriters' Laboratories, Inc.

A secret of KRESKY'S low-cost, trouble-free operation is the famous patented KRESKY Oil Burner, basic unit in all models. It inducts air into the oil flame in just-right amounts by an electric blower to give fast, high-low clean heat in all climates and altitudes, regardless of draft conditions. That's why a precision engineered KRESKY Floor Furnace provides your customers with abundant, clean healthy heat, evenly distributed along floors, into drafty corners, with less oil consumption. Your customers are freed from daily attention, and costly service calls.

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Get your "replacement" story—*now*—to people with bulky and unsightly space heaters, and beat competition by a month or two. For those who install the Kresky Floor Furnace, it means more "living" space, cleaner, faster heat at less cost. And for you, more profits. *Feature the All-Year-Round KRESKY line.*

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NEW! REVOLUTIONARY! MODERN!

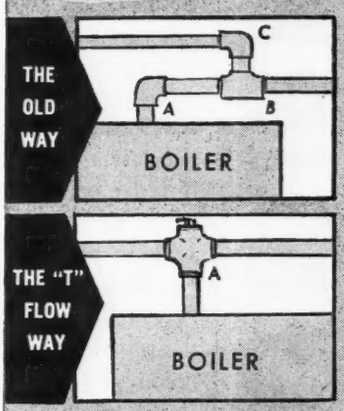
The Only *TWO-DIRECTIONAL* FLOW CONTROL VALVE *AT NO EXTRA COST*

A masterpiece of engineering ingenuity . . . a simple advancement . . . yet essential to all Hot Water Circulating Systems.

- Sizes 1"—1¼"—1½"—2"
- Used also as one-directional flow control valve
- SAVES LABOR
- SAVES TIME

AT NO EXTRA COST

PAT. PEND.



Water circulated from boiler through old "one-directional" flow valve (A), continues to T-Joint (B) and is partially diverted to L-Joint (C) where finally "TWO-DIRECTIONAL" flow is reached. **RESULT** *. . . unbalanced circulation, more work involved in installations, more piping and fittings needed, greater costs in time and materials.*

Water circulated from boiler to QUALITY *"T" Flow Control Valve (A).* **RESULT** *. . . immediate "TWO-DIRECTIONAL" flow, balanced circulation, less piping and fittings needed,* **LESS** *costs in time and materials.*

"SWEAT-ADAPTER" ELIMINATED WITH THE *Bronze* . . .

SWEATFLOW Control Valve

AT NO EXTRA COST

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"Sweatflow" Control Valves are designed especially for direct "sweat" connections with copper tube installations in all Hot Water Circulating Systems . . . without the use of "sweat-adapters." Sizes 1"—1¼"—1½"—2". This is a modern heating advancement developed by the engineers of the Quality Specialty Company, Inc., of Philadelphia.

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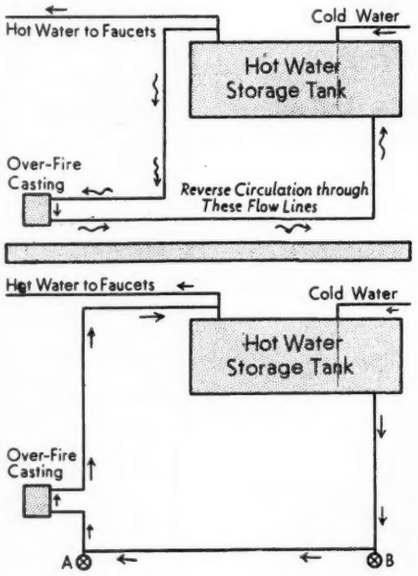
burner operation caused the water in the over-fire casting to boil. Sluggish circulation caused the casting to overheat. Rusty water and pipe noises were natural results.



Opening a hot water faucet with the burner running caused instant reversal of the circulation in the flow lines to the over-fire casting, heated the tank properly, and gave ample hot water. Proper circulation continued when once started. But the next time the burner started while no hot water was being drawn, again there was the troublesome reverse circulation. Drawing some hot water every time the burner started would end the trouble, it was determined, but was not an ideal remedy.

The trouble was ended by improving the layout as the lower drawing shows. Now, where the lines from the over-fire casting come out of the furnace, one immediately goes straight down for 18", while the other (hot) goes straight up for 40". This eliminates chances of reverse circulation. A and B are draw-off faucets, used several times a year to remove rust and sediment from the line between them.

* * *

Weak Fuel Unit?

Summoned finally as a real expert to see a sick pressure burner which stopped "on safety" twice a week but which ten calls by another mechanic had failed to cure, this certain burner man tested the burner for two hours before it acted anything but perfect. Then the flame died down with the burner running.

The service man examined the fuel unit strainer, but could not make up his mind whether or not it was sufficiently sludged-up to starve the oil pump and cause the atomizing pressure to drop at times. He cleaned it anyhow. His doubts increased when the owner told him that in this little house, using but 1,200 gallons of oil a year, the oil line filter cartridge had been replaced, and the fuel unit strainer had been cleaned, all during the last six months.

Was a weak pump causing the flame failure at times? To ward off chances of

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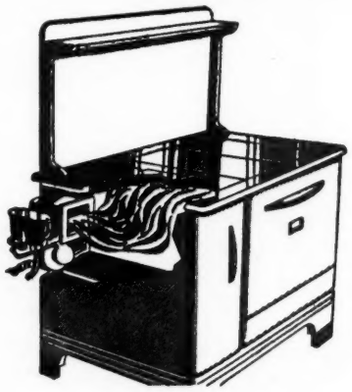
Combination
OIL BURNER



SALES prospects for this modernizing, easily installed oil burner are *all* owners of gas, wood and coal stoves and ranges. Super-Therm fits any size stove, front or rear —will last a lifetime—will not soot or smoke—has automatic safety features. Write now for details and *dealer profit* facts.

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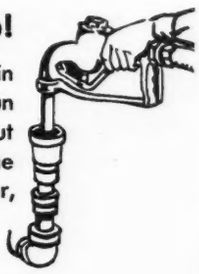

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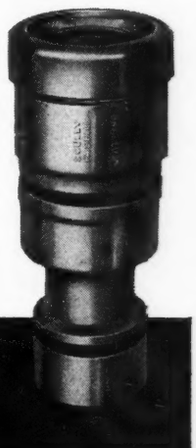

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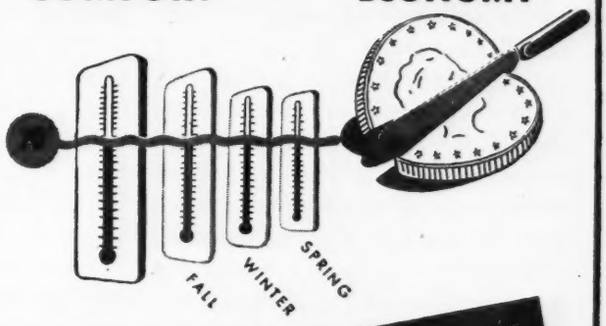

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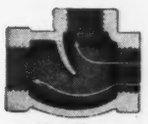
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SEE YOUR WHOLESALER TODAY

this, says the man, he simply reduced the atomizing pressure by 15 lbs.

"I reduced the atomizing pressure to favor a pump which was possibly weak," the expert explains, "because the owner, fed up with wasting money on service call after service call, gave me just one chance to fix the job. My call took a little over three hours' time and cost him $15. But he's delighted now, as the burner has run six months without trouble, and this is the first time in three years it's done that. I'm still wondering if the real trouble lay in a weak pump or a plugged strainer in the fuel unit. I took no chance in cutting the nozzle pressure, for lower pressure would do no harm and might do some real good."

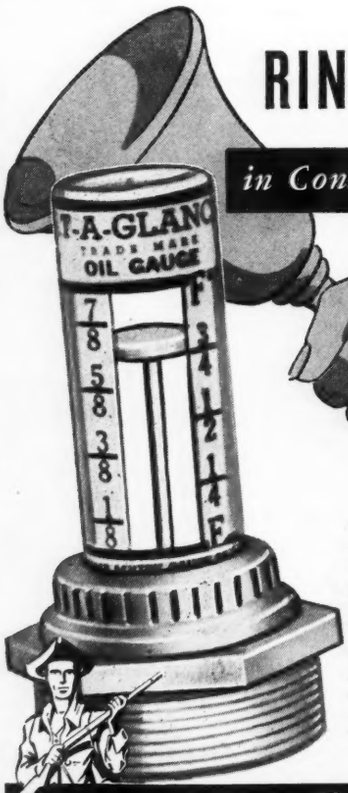
* * *

Hot Water Tanks

In planning the piping of hot water tanks, design to avoid mixing of hot water already in the tanks with cold water entering because hot water is being drawn. The 30-gallons of hot water left in a 60-gallon tank after a few baths are taken, for example, can serve for additional hot baths only if it has not been mixed with cold water. Mixing 30-gallons of hot water in a tank with 30-gallons of cold water that has just entered gives 60-gallons of water too cool for baths, dish-washing, or any other household requirement.

The upper part of the diagram shows one engineer's pet method for feeding cold water into a hot water tank. At the bottom left is an indirect water heater coil. The cold water enters the tank through a horizontal pipe a few inches from the tank bottom, closed at the left-hand end and drilled with many small holes which direct the cold water downwards, spreading it in an even layer over the bottom of the tank. Using any good method to spread the cold water over the bottom of a tank, says this engineer, boosts greatly the amount of hot water which can be drawn on any installation. Piped properly in this respect, he says, a 60-gallon hot water tank gives more hot water than a 120-gallon tank piped improperly. Special care in avoiding mixing hot and cold water in the tanks permits using 40-gallon tanks in many homes which ordinarily would need 60-gallon or larger tanks. With proper piping, you can draw almost 10-gallons of scalding hot water from a tank which has gone cold, then in 15-minutes has received 10-gallons of hot water from an indirect heater. With improper piping which mixes hot and cold water in the tank you can't do this; after the tank has gone cold, scalding hot water will be available again only after you wait an hour or two for the entire tank to become heated. Mixing 10-gallons of newly-heated water with 30 or 40-gallons of cold water in a tank merely gives a tankful of tepid water and provides no satisfaction for house occupants waiting for a few more gallons of water really hot.

Diag. A shows the method used by most contractors, where the tank has openings suitable for this, to spread cold water over the bottom of a tank. Where the tanks lack suitable openings to use this standard method, the ideas in Diags. B, C, and D may be used. Diag. B shows what sometimes is called the bent-pipe method. Diag. C deserves special attention. A nipple with a long thread extends up into the tank bottom. Closed



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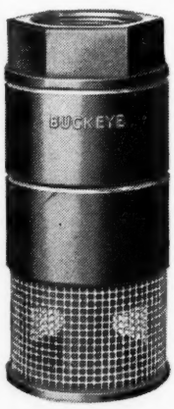

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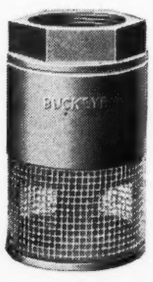

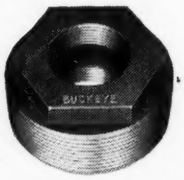

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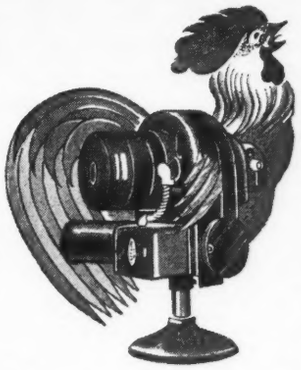

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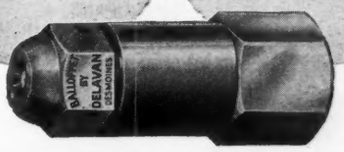

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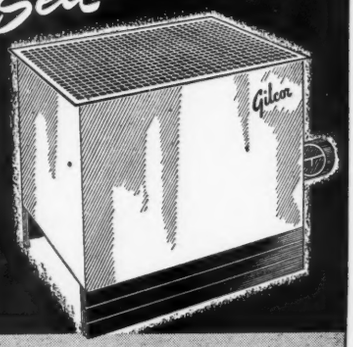

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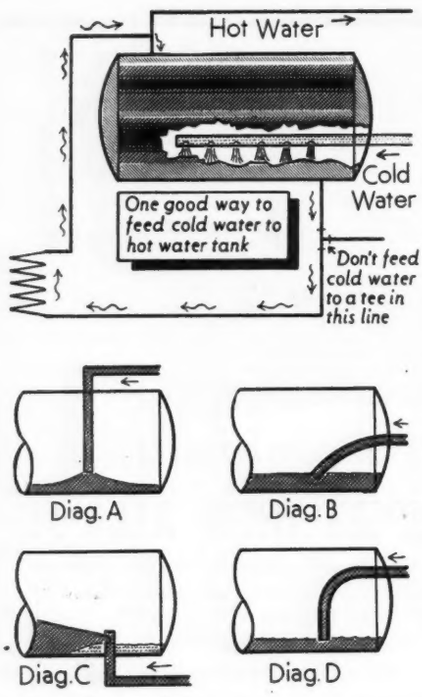
Hot Water
Cold Water
One good way to feed cold water to hot water tank
Don't feed cold water to a tee in this line
Diag. A
Diag. B
Diag. C
Diag. D

at the top by soldering, welding, or brazing, this nipple has a notch cut into its side so that water squirting out of the notch is directed sidewise over the bottom of the tank. This method is very helpful where a small opening in the tank must be used, since the nipple is the same size as the tank opening, not of reduced size as in some other types of connections. Make up a few special nipples in the shop if you intend using this new idea. Design them to fan out the cold water and to direct it downwards over the tank bottoms.

Diag. D, using the "slip fitting" usually used to connect copper tube suction lines to buried oil storage tanks, is especially suitable for oilburner men, for they have this special fitting on hand. Slipped into any opening in the end of the tank, the piece of copper tubing is bent down so that its open end will spread the cold water over the bottom of the tank. Then the main part of the suction line tank fitting is screwed into the tank, the bead or ferrule is put on the tubing, and the remaining part of the fitting is made up tight to give a water-tight connection and hold the tubing in the proper location. Mark the tubing; don't turn it sidewise as you tighten the special fitting.

A note in the upper drawing cautions against feeding cold water by locating a pipe tee in the flow line to the bottom of an indirect water heater. If, when hot water is drawn, most of the cold water goes towards the indirect heater, then cool water will come out of the heater top and reach the top of the tank, giving trouble because it mixes with the hot water already there. This is simply because, unlike a tankless-type heater, a tank-type heater fails to heat properly water going through it at more than a trickle-rate. If on the other hand most of the incoming cold water flows up into the tank, it will jet up into the hot water stored in the tank. The resultant turbulence will mix the cold and hot water in the tank; the tank may be full of hot water to start out, but before half of this is drawn the hot water faucets will give water so cool as to cause complaints.

◈

Howard Marston has been appointed industrial manager, Brown division, Minneapolis-Honeywell Regulator Co. in Minneapolis and St. Paul. For ten years he has been sales and service engineer at Minneapolis-Honeywell's Boston branch.

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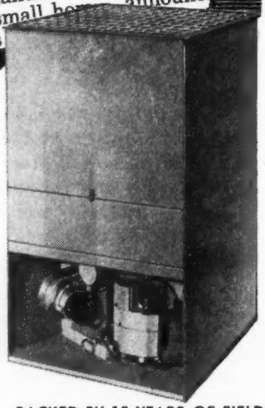

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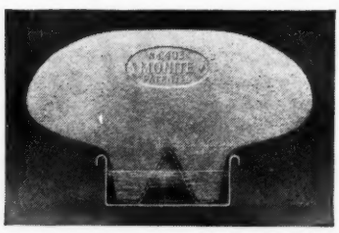

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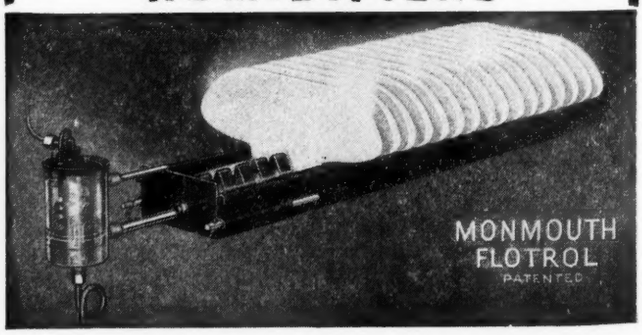


FEDERAL'S

Advanced Engineering

MAKES SALES

Write for our fully detailed bulletin . . . find out *all* the facts on FEDERAL'S Advanced Engineering Features that will mean easier selling for you!

FEDERAL BOILER CO., INC.
Granite & West Sts., Midland Park, N. J.
Gentlemen:
Please send me Bulletin No. 122.
Name .....
Address .....

FEDERAL BOILER CO. INC. FBC
GRANITE & WEST STS., MIDLAND PARK, N. J.

Representatives in Principal Cities

IT'S NEW! IT'S COMPLETE!

DWYER TRANSPARENT COMBUSTION TEST SET

Correctly Helps You . . .

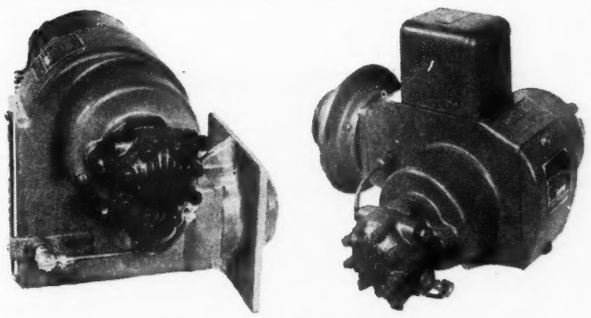
- **Determine proper CO_2 content**
- **Check for air leaks**
- **Adjust air controls**
- **Know draft conditions**
- **Level burners and controls**
- **Find stack temperature readings**

The new DWYER Combustion Test Set helps you lick the continuing fuel shortage. Every instrument necessary to do the job included . . . CO_2 Indicator, Visi-Draft Gage & Level, and Stack Thermometer. Furnished with durable carrying case, all accessories and instructions $33.50

Bulletin 220 describes this set as well as other styles and components. Write for it!

F. W. Dwyer Mfg. Co.

315 South Western Avenue, Chicago 12, Ill.



FLANGED

QUIET AUTOMATIC OIL BURNER

Especially designed to fit Air Conditioning and Steam or Hot Water Furnaces for Thatcher, American Radiator, Kaustine, International, Koven, Kewanee, etc.

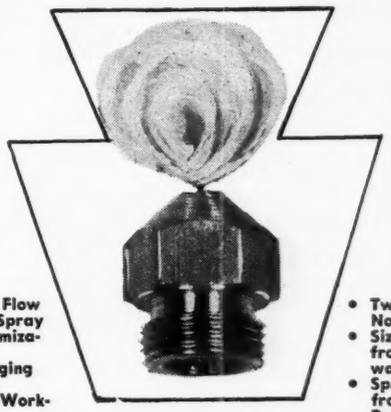
SAVE 25% TO 50%
BY BUYING DIRECT . . .

QUIET AUTOMATIC BURNER CORP.
Manufacturers and Engineers
NEWARK 4, N. J.

NOTICE

KEYSTONE NOZZLES

AN IMPROVED STAINLESS STEEL NOZZLE AT A LOW COST



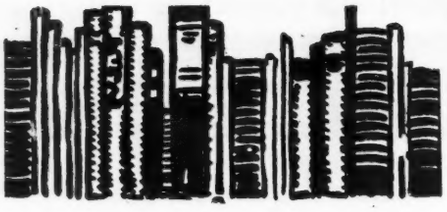
- Accurate Flow
- Uniform Spray
- Finer Atomization
- Non Clogging Features
- Precision Workmanship

- Two Piece Nozzle
- Sizes Range from .60 Upward
- Spray Angles from 20 to 90 Degrees

ALSO — STRAINERS • ADAPTERS
SPECIALTY NOZZLES

WRITE TODAY FOR LITERATURE & PRICES

KEYSTONE NOZZLE COMPANY
358 SUSSEX AVENUE MORRISTOWN, NEW JERSEY



THE BOOK SHELF

Arco Book Helps With N. Y. Installers Exam

SIMPLE STUDY MATERIAL, examination questions and answers are contained in a book designed to help those who are taking the examination for oilburner installer, as required for a license to do business in New York City.

Besides two sample trial examinations, the book contains the oilburner rules of the New York City Board of Standards and Appeals; general information on oils, oilburners, and heating plants; regulations of the National Board of Fire Underwriters; controls; fueloil commercial standards (CS12-40); excerpts from typical installation and service manuals; and the commercial standard for domestic mechanical draft oilburners (CS75-39).

The book in paper covers contains 95 pages of material, 8 x 10½ ins. It is published by Arco Publishing Co., New York, and sells for $2.50 per copy.

Westinghouse Guide To Electric Heating

A PRACTICAL GUIDE to the design and installation of electric heating for homes has been released by Westinghouse Electric Corp. The 42-page manual, "Electric Heating for Homes" reduces designing an electric heating system to the simple process of selecting the required heating capacity for a given room for the proper chart.

The charts are easy to use and allow for floor and window area factors, double or single pane glass, insulation and exposed walls. Also included are data on selection, location and installation of wall and floor model unit heaters.

Copes of the Guide (B-3768-A), are obtainable from any office of the Westinghouse Electric Supply Co. or other Westinghouse distributors. Price: $2.00.

Manufacturers Activities

Howell Moves Office; Changes Corporate Name

HOWELL ENGINEERING CORP. is the new corporate name of the H. A. Howell Oil Burner Co., and the company has moved from its Dixon, Ill. address to Oregon, Ill. The company is continuing its manufacture of a line of domestic and commercial oilburners.

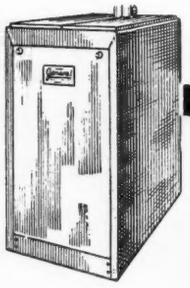
Before moving, the company exhibited at the June Better Home Show in Dixon. Its booth featured two domestic model burners, one pedestal type, the other a flange-mounted model. A cut-a-way model illustrated burner features and the patented combustion head, now standard equipment on all Howell burners.

Texaco Enlarges Facilities At Research Laboratories

CONSTRUCTION of three new buildings at Beacon, N. Y., will enlarge the Texas Company's research laboratory facilities

THE
EXCEPTION
PROVES THE RULE!

Steel Boiler Furnace
Series T



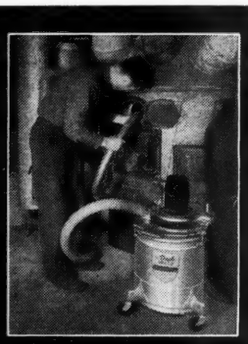
EXCEPTIONAL performance backs up these outstanding features—

- √ Easy Installation
- √ All Steel Boiler
- √ Welded-in Water Tubes
- √ Quick Heat Circulation
- √ Precast Combustion Chamber
- √ Glass Wool Insulated
- √ Smooth, Quiet Operation
- √ New Precision Combustor (P-C) Burner Assures Maximum Economy and Efficiency.

GENERAL Automatic
Est. 1924

GENERAL OIL BURNER CORP.
2300 Sinclair Lane
Baltimore 13, Md.

SUBSTANTIAL PROFITS for YOU—
Cleaning Furnaces with the
GRAND RAPIDS De Luxe
FURNACE CLEANER



You can put furnace cleaning on a money making basis by using a Grand Rapids Furnace Cleaner. High velocity suction scoops up all deposits of soot, ashes and carbon, cleaning the heating plant and re-establishing full efficiency. Special attachments clean flues, radiators, right angle turns and other hard-to-reach areas. The job is done quickly and completely. Customers are highly satisfied.

The Grand Rapids DeLuxe Furnace Cleaner is also your "in" for more than cleaning profits. By checking over and inspecting the heating plant as you clean it you are in a position to make timely recommendations for new equipment or repairs. This means better service for customers . . . more profits for you.

Write for complete information and prices today.

DOYLE VACUUM CLEANER CO.
233 Stevens St., S.W. Grand Rapids 7, Mich.

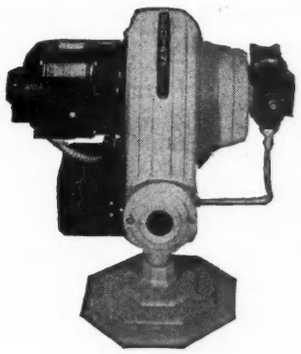
BURN CATALYTIC OILS EASILY

with NO SOOT and NO TROUBLE!

Sell and install the New, Improved

RADIANT

• OIL BURNER •



4 sizes . . . 1 to 20 gph

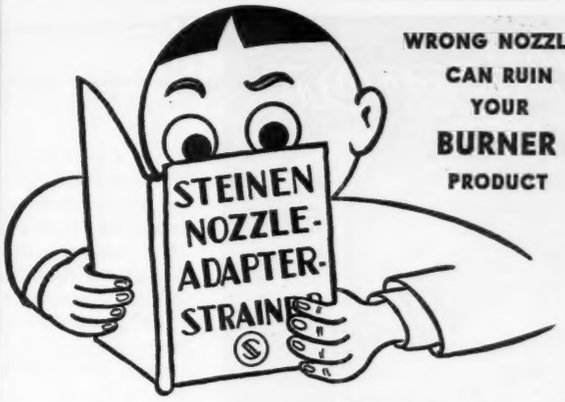
Low in Cost . . . Dependable . . . A profit-maker for dealers . . . easy to service because it was designed to reduce service costs and increase efficiencies.

"YOUR FUTURE IS BRIGHT WITH RADIANT!"

Literature on Request.

RADIANT UTILITIES CORP.

1859 Cropsey Ave. Brooklyn 14, N. Y.



WRONG NOZZLES CAN RUIN YOUR BURNER PRODUCT

NOZZLES — STRAINER — ADAPTER

What's Behind This Trade Mark

STEINEN

Why it's so important to everyone who uses STEINEN products because it means better burner performance.

Dependable year in, year out. Backed by 40 years experience in the manufacturing of engineered products for some of the leading manufacturers in the country.

WM. STEINEN MFG. CO.

Newark 5, N. J.

To our readers:

Do you know that this copy of FUELOIL & OIL HEAT is apt to be read by you and 2 other persons in the oilheating and fueloil business?

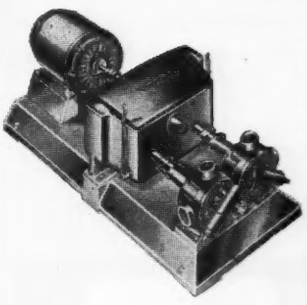
Verified by FACT FINDERS

IMPORTANT! *The New, Modern*

VIKING TWIN UNIT

IS UNDERWRITER'S APPROVED

Needs No Pump House!



The complete unit is Underwriter's approved for outside or inside operation. It's weatherproof, dust-proof, water-proof and explosion-proof. It's specially designed for petroleum bulk stations to pump two similar petroleum products. Each pump delivers 100 gallons per minute.

WRITE FOR BULLETIN B400

Ask your Distributor about Delivery, Prices, Etc.

See Our Catalog in SWEETS

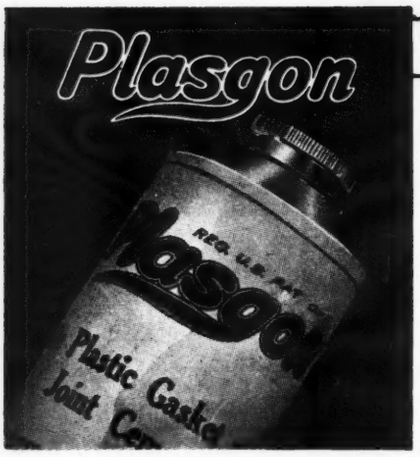
Viking PUMP COMPANY

Cedar Falls, Iowa

FACTORY REPRESENTATIVE WANTED

High class salesman experienced in selling oil burner dealer and service organizations, heating jobbers and independent fuel oil distributors. Must concentrate efforts in comparatively small territory selling Delavan Sludge Solvent. Tremendous sales possibilities because it really works. Sold on a money-back guarantee that it will dissolve sludge and make it burnable; eliminate soot; keep oil burner tanks, lines, filters and nozzles clean. Good territories still open. Liberal commissions. Write at once giving full information about yourself, lines now handled, territory desired and references.

DELAVAN ENGINEERING CO., Des Moines 9, Iowa



FOR **PERMANENT** PIPE JOINTS

THAT **MUSTN'T** LEAK

You can forget service and repair worries when you use Plasgon, the versatile, plastic pipe joint cement. No heating, thinning, or special treatment required. Tough-yet-flexible Plasgon withstands heat up to 360° F. and considerable pressure . . . won't dry out . . . is proof against oil, steam, gasoline, and other common solvents . . . unaffected by shock or jarring. Plasgon joints remain trouble-free. NOTE: Make those odd-shaped, hard-to-replace gaskets last by coating them with Plasgon for greater efficiency.

Write Today for free sample of Plasgon and complete information.

Samuel Cabot, Inc. 2277 Oliver Bldg., Boston 9, Mass.

there by forty per cent. Contracts for the buildings have been awarded and construction is scheduled for completion within one year. Additional floor space, totaling 55,000 sq. ft., will be provided.

A new engineering building will contain laboratories for combustion studies, volatility and lubrication. The chemistry building being built will contain laboratories for lubricant development and the third building will house office space.

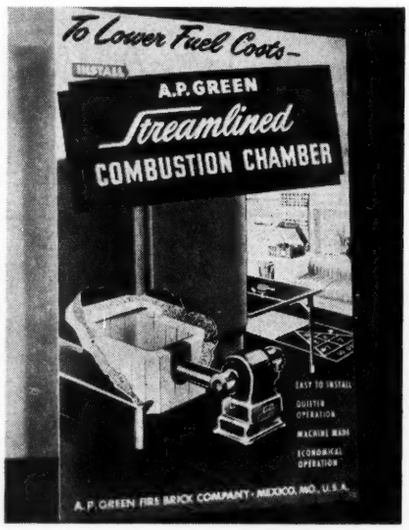
Richmond Oil Equipment Issues 1948 Catalog

CATALOG M-15, available from Richmond Oil Equipment Co., Inc., Richmond, Va. and Atlanta, Ga., is the 1948 edition, containing complete technical and informational data on the line of ROECO petroleum handling equipment.

The initial section of the catalog is devoted to descriptions and illustrations on all types of oil handling, delivery and metering units. Basement and underground, as well as bulk storage tanks are featured, as are various sizes and types of fueloil truck tanks.

Green Poster Features Burner Combustion Chamber

A DISPLAY POSTER, available without charge from A. P. Green Fire Brick Co., Mexico, Mo., features the Streamlined



fire-clay combustion chamber for use in oilburning installations. In full color, the poster measures 22 by 34 inches, with a double easel back, suitable to use in show windows on floors or counters of the showrooms of firms merchandising Green's combustion chamber and refractory products.

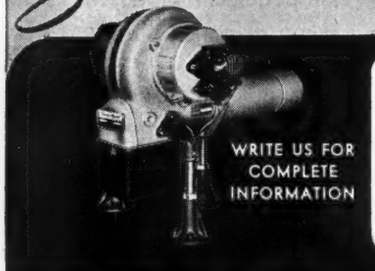
This is believed to be the first instance of a firebrick manufacturer merchandising its products direct to the consumer through oilburner dealers, distributors and supply houses normally handling this type of equipment.

Viking Salesmen At Preview of Blower-Package

TO IMPLEMENT what is described as the company's most comprehensive and powerful sales campaign, Marion I. Levy, president, Viking Air Conditioning Corp., Cleveland 2, Ohio, summoned its salesmen to a recent meeting. Representatives covering the entire country attended the three day session and indicated enthusiastic interest at a preview of the new Viking-Blower-Package.

During the six sessions, held morning and afternoon, talks were given by company executives on new engineering developments, styling, sales policies, advertising and promotion campaigns. An

Sundstrand OIL BURNERS



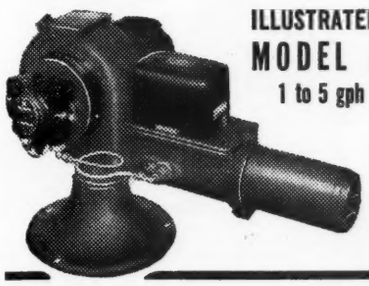
WRITE US FOR COMPLETE INFORMATION

FOR
- CLEAN
- QUIET
- ECONOMICAL
- AUTOMATIC HEAT

SUNDSTRAND ENGINEERING CO.
ROCKFORD, ILLINOIS

A Complete Line of
RUDY
FURNACES
for Coal • Oil • Gas
write
Rudy Manufacturing Co., Dowagiac, Mich.

One of the *OLDEST BURNERS* ...one of the *FINEST!*



ILLUSTRATED
MODEL L
1 to 5 gph

U. S. oil burners offer much more in performance and fuel economy—for much less in proportionate cost.
One of the oldest manufacturers of oil burners, if not *the* oldest, U. S. has kept abreast or ahead of the times in burner design and mechanical engineering.
3 models are available, 1 to 5 gph, 4 to 8 gph and 7 to 16 gph . . . a range to cover almost any heating specification.

Write, wire or phone for detailed information.

UNITED STATES BURNER CORP., HARTFORD, CONN.

innovation was a two hour "gripe" session, where, contrary to usual procedure, engineering personnel were the recipients of a volley of compliments.

York-Heat Dealers Attend Series of Meetings

A SERIES of four meetings held during the month of June by York-Shipley, Inc., York, Pa., was attended by more than eight hundred dealers. The meetings, held in the east and mid-west, displayed the new line of York-Heat products and outlined a merchandising program. Starting with a meeting on June 2, held in York and attended by dealers from central Pennsylvania, Maryland and southern New Jersey, the series continued with meetings in Boston for eastern Massachusetts, Maine, New Hampshire and Vermont dealers; in Hartford for Connecticut and western Massachusetts dealers. The final meeting, held in Detroit on June 24, was for dealers from Michigan, Ohio and Indiana.

New equipment shown included a new boiler-burner unit for radiant heating installations, tubeless boiler units, vaporizing and gun type water heaters, vaporizing gravity and forced warm air furnaces. A redesigned winter air conditioner, with fully enclosed jacket, also was displayed.

Sessions were conducted by S. H. Shipley, president; Mitchel Landau, assistant to the president; Harry Carpenter and James Lahey, district managers and John R. Adams, W. H. Long Co., advertising agency. The program was

PREFERRED
DRAFT-A-JUSTOR

The Original. Still the Best. Hundreds of Thousands in Use. • Holds the draft constant in the fire box. • Scientific draft control for the smallest to the largest jobs. • Stove, domestic, and commercial sizes from 4" to 24" in diameter. • Industrial sizes from 24" x 24" to 5' x 12'.

Write for literature and trade price

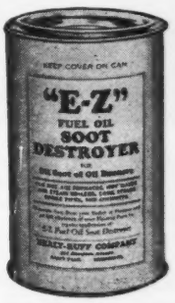
PREFERRED UTILITIES Mfg. Corp.
1860 Broadway, New York 23, N. Y. Boston Office: 839 Beacon St.

E-Z MORE PROFIT PER *Service Call*

When the oil burner Servicemen answer a call it is easy many times to add furnace cleaning to the job. E-Z Fuel Oil Soot Destroyer (for fuel oil soot only) does a thorough, clean, safe job in just one application. Takes but a few minutes. Keep a 5 lb. Can on each service truck, always. Stock the 1 lb. Cans for sales to your customers. If your Distributor cannot supply you, order direct.

No. 1 Pkg. approx. 1 lb. ...List $1.00 ea.
No. 5 Pkg. approx. 5 lbs. ..List $4.50 ea.
Liberal discount to bona fide Servicemen.

Special discount to Distributors on quantity purchases, allows for extending regular discount to Dealers and Servicemen.



HEALY-RUFF COMPANY
797 Hampden Avenue • St. Paul 4, Minnesota

Yula
MIXING VALVE

The Yula Mixing Valve perfectly tempers hot water to a predetermined temperature for domestic use at lowest cost.

It "tops" them all.

Write to Dept. F8

Yula
WATER HEATERS, INC.
166 WEST 225 ST. • NEW YORK 63

HAYWARD OIL BURNERS

Many Attractive Territories still open for Exclusive Distribution

HAYWARD MFG. CO., INC.
506 COURT STREET BROOKLYN 31, N. Y.

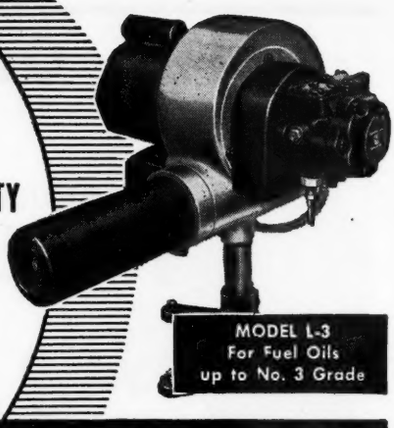
RAYFIELD
AUTOMATIC
OIL BURNERS

HIGH LIGHT OIL PRICES MAKE GOLDEN OPPORTUNITY

Cash in on conversion and replacement jobs now by installing Rayfield burners for No. 5 oil and make profits for yourself and savings for your customers.

Model JR for 2,000 to 8,000 Gals. yearly
Model D4 for 5,000 to 20,000 Gals. yearly

Investigate comparative oil prices in your locality now and figure it out for yourself—it will amaze you.

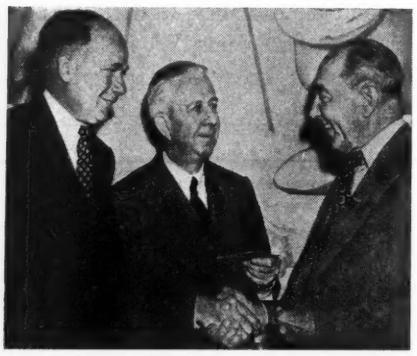


C. L. RAYFIELD CO., 2010-18 S. Halsted St., Chicago 8, Ill.

built around a slide film presentation of the complete York-Heat story.

Honeywell Executives Receive Service Pins

MORE THAN five hundred veteran employees of the Minneapolis-Honeywell Regulator Co., attended a mid-year din-



Mark C. Honeywell, *right, accepts award from Willard L. Huff, center, while Harold W. Sweatt, left, watches.*

ner at the Nicollet Hotel, Minneapolis, Minn. Forty pins were awarded to commemorate periods of service with the company ranging from twenty to forty years.

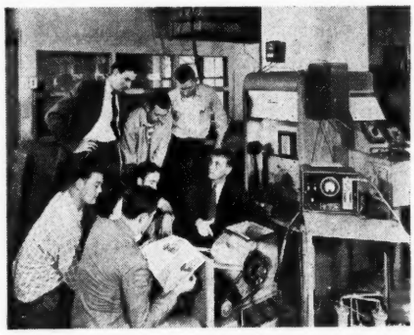
Recipients included H. W. Sweatt, president of the company, who received a thirty-five year pin and Mark C. Honeywell, chairman of the board, who was given a forty year pin by Willard L. Huff, executive vice president.

Richfield Burner Combines Office And Factory Set-Ups

EFFECTIVE JULY 10, Richfield Manufacturing Corp. combined its office and factory, in a move described as permitting more efficient handling of a growing volume of business. The company, manufacturing oilburners with patented Flame Control Turbulator combustion heads, relocated its office set-up from its New York address and the entire operation now is established at 139 South Grand Ave., Baldwin, L. I., N. Y.

Students On Tour Of Mueller Factory

L. J. MUELLER FURNACE CO., Milwaukee 7, Wis., recently played host to heat-

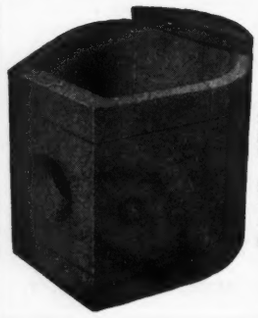


Robert F. Hume, *field service manager, describes Roll-a-Drawer feature of Mueller furnace to students from the Milwaukee School of Engineering.*

ing, air conditioning and refrigeration students of the Milwaukee School of Engineering, who were taken on tours of the fifteen acre Mueller plant on two successive days.

All phases of furnace design and manufacturing were presented to the students, with emphasis on the experimentation and testing performed before a unit is marketed. Specific types of furnace design were discussed and actual tests on heating and cooling units were conducted for the group.

truly TIME-TESTED



WHATEVER YOUR COMBUSTION CHAMBER NEEDS, WE PROBABLY HAVE A

LITE-CAST
CHAMBER TO DO THE JOB

WRITE FOR LITERATURE AND MORE COMPLETE DETAILS TO

Monogram Products Co.
PHILADELPHIA 4, PA.

EXCLUSIVE SPIRAL FLUE
gives you more to sell!

Here's "horizontal" boiler efficiency with "vertical" boiler compactness! The exclusive Spiral Flue (Pat. applied for) is offered only by EVEREDY and OILTRONIC Burner-Boiler Units. Capacities up to 1,043,000 BTU.

CONVERSION OIL BURNERS
0.65 to 20 G.P.H.

MT. HAWLEY MFG. COMPANY
MT. HAWLEY AIRPORT PEORIA, ILLINOIS

FUEL OIL METER TICKETS

IMMEDIATE SHIPMENT—ANY QUANTITY FROM 500 UP
6 STANDARD FORMS TO FIT ALL PRINTING METERS
IMPRINTED WITH YOUR NAME AND ADDRESS

New Features

★ SHARP, CLEAR GALLONAGE IMPRESSIONS on ALL COPIES, even in sub-zero weather

PRODUCED BY

★ WATTS "VUETHRU" Transparent, Oil and Weather Resistant Top Sheet

AND BY

★ WATTS Non-Freeze Super-Sensitive BLACK Carbons.

SEND FOR SAMPLES AND PRICES — SPECIFY MAKE OF PRINTING METER

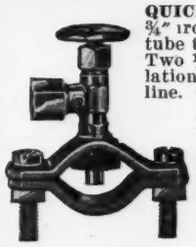
WATTS Business Forms SINCE 1897

ALFRED ALLEN WATTS COMPANY, INC.

NEW JERSEY OFFICE
740 WASHINGTON AVE.
BELLEVILLE 9, N. J.

NEW YORK OFFICE
216 WILLIAM ST.
NEW YORK 7, N. Y.

SADDLE VALVES



No. 8 Saddle Valve

QUICK HOOK-UP SADDLE VALVE for ½" and ¾" iron pipe—machined brass forging with insert tube to fit ¼" hole and with brass wheel handle. Two ¼" bolts and leather washer for easy installation. To attach merely drill ¼" hole in supply line. Conforms to city ordinances.

NEEDLE VALVE—For controlling water supply to humidifiers and feed valves. Made of corrosive-resisting brass. ⅛" iron pipe male end, and ¼" O. D. copper tube on outlet.

No. 816 Needle Valve

PROMPT DELIVERIES — See your jobber, or write us!

MAID-O'-MIST, Inc. 3221 N. Pulaski Rd. Chicago 41, Ill.

Sid Harvey's Open House Well Attended By Dealers

THE FOURTH ANNUAL OPEN HOUSE and Trouble Shooting School, sponsored by Sid Harvey, Inc., Valley Stream, N. Y., played host to 778 dealers during the month of June. Open House is a one-day guided tour of the company's complete facilities, with exhibits arranged in each of the eight divisions of the repair department to highlight various service troubles. Foremen explained the exhibits and answered questions. Featured also were exhibits of fuel saving devices and the Harvey burner casting with Shell combustion head. This exhibit was under fire and dealers were shown how to adjust and service the burner.

The visitors, representing a cross-section of the industry, came, for the most part, from New York, New Jersey and Connecticut. Eight other states and the District of Columbia were represented, with one visitor from Miami, Fla. The dealers were entertained for lunch at a local restaurant and then returned to the factory for an afternoon session. Sid Harvey, president, revealed that the success of the Open House has prompted the decision to continue it as an annual affair.

Midwest Sales Company Named Evans Representative

APPOINTMENT of Midwest Sales Co., St. Louis, Mo., as sales representatives for Evans Products Co., Plymouth,

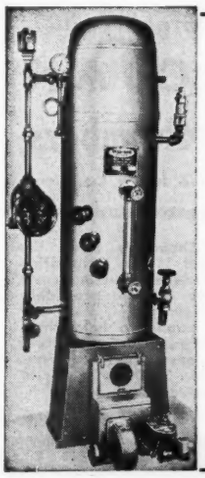
GORTON

VAPOR EQUALIZING VALVES
and
AIR ELIMINATORS
For Automatic Heating

THE SURE CURE FOR COLD RADIATORS

Bulletin No. 115 and prices gladly sent upon request.

GORTON HEATING CORP.
Since 1887 — Mfrs. High Grade Heating Equipment
CRANFORD NEW JERSEY



KRES-KNO VITROPAK AUTOMATIC STEAM GENERATORS

100 lbs. Working Pressure, A.S.M.E. Approved
From one to 100 Horsepower

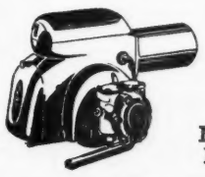
Complete with or without low water cutoff and pump controls, condensation system. Packaged ready to install with complete instructions.

Suitable for Tailor Pressing Machines, Laundries, Dry Cleaners, Chemical Plants, Food Processing, and many other applications where high pressure steam is required.

Wholesale Distributors of
Commercial Oil Burning Equipment, Oil Burners, Controls, Supplies, and Accessories since 1931.

Oil Heat Utilities of Long Island, Inc.
730 Avenue of the Americas, New York 10, N. Y.

Build
REPLACEMENT SALES
With
The Oil-Thrifty



HERCO

LANCASTER, PENNSYLVANIA
HERCO OIL BURNER CORP.

STANDARD WATER TUBE BOILERS

A MODERN HEATING PLANT FOR BETTER HOMES!

designed for ECONOMY of OPERATION
DEPENDABILITY and
EFFICIENCY

Write for BULLETIN No. 108

Standard Heater & Oil Equipment Co.
245 CORNELISON AVENUE, JERSEY CITY 2, NEW JERSEY

Mich., has been announced. The company will handle Evans automatic oil-fired water heaters and home heating equipment. The line includes four new forced draft furnaces, shipped as complete package units and designed to care for 84% of domestic heating requirements.

Midwest is headed by M. R. Cardwell, president and John D. Gibbons, secretary-treasurer. Its territory will consist of eastern Missouri, southern Illinois and western Kentucky.

Thatcher Furnace Heats New York Dream House

AN EIGHT ROOM HOUSE, inspired by the recent best seller and motion picture, "Mr. Blanding Builds His Dream House," has been erected and completely outfitted on Fifth Ave., New York, sponsored by the New York Heart Association. The colonial type house will remain on exhibit until mid-September, with all proceeds going to the Association.

The heating system is forced draft winter air conditioning, fired by a Thatcher Comfort Master oilburning furnace, a product of the Thatcher Furnace Co., Garwood, N. J. Since the normal tour of inspection of the house covers all rooms from basement to attic thousands of visitors have been afforded an opportunity to view the heating installation.

Shown *at the left is the Thatcher oilfired unit installed in the New York version of "Mr. Blanding's Dream House." At the right, R. M. Houston, sales manager of oilheating equipment, Arrow Petroleum Co., demonstrates to Ted Caldwell, secretary, Chicago Oil Burner Association, the G-E oil furnace, as it appears in the Evanston, Illinois adaptation of the house.*

Crotty Awarded Large Oilheating Contract

CROTTY CO., INC., a subsidiary of the Crotty Mfg. Corp., Flushing, N. Y., manufacturers of the Crotty boiler, has been awarded one of the largest oilheating contracts placed in New York City. The contract, in excess of $60,000, was

For More Profitable Jobs

NU-TROJAN Combustion Chambers

A Product of McLeod & Henry Co., Inc.

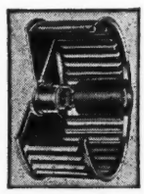
Nu-Trojan Chambers have the features that lower installation costs and reduce servicing costs to help you secure profitable jobs. Has few parts, does not need steel bands to hold them in place. First quality "Steel Mixture" Pennsylvania fire clay. Fusing point 3180° F. Write Dept. 61 for details.

A. R. WEBBER CO., INC.
DEPT. 61
NEW HAVEN 11, CONN.

EVERYTHING FOR THE OIL BURNER TRADE

Your Source of Supply for L-R FLEXIBLE COUPLINGS

USE FANS WITH L-R JAWS AND SAVE MONEY



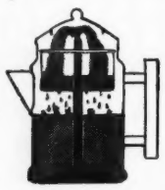
There is no substitute for L-R Flexible Couplings in the Oil Heating Industry—whether used for pumps, fans, blowers or transmission of power from motor to equipment. They are the dependable, fool-proof standard of the trade.

LOVEJOY FLEXIBLE COUPLING COMPANY
5012 W. LAKE STREET, CHICAGO 44, ILLINOIS

PERCOFLASH the flash-action BOILER

The amazing operating efficiency of the PERCOFLASH Boiler is found in its unique percolating principle of design. Water is flashed into steam in all heads with exceptional rapidity and efficiency. Geyser tubes raise water to steam heads eliminating the necessity of raising all water in boiler to steaming temperature. This means faster and more economical generation of steam. It's a fuel saver whether coal, gas or oil.

When you think of Percolating action, think of PERCO-FLASH!

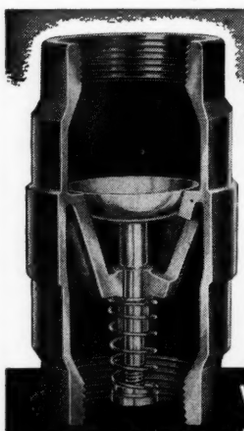


PERCO PATENTED FLASH

DISTRIBUTORS—DEALERS . . .
Write for Franchise Plan!

Westcott-Alexander, Inc.
MADISON, NEW JERSEY

PERCOFLASH
Incorporated
120 S. LaSalle, Chicago



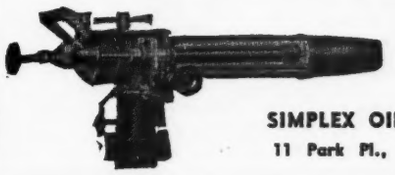
Strataflo

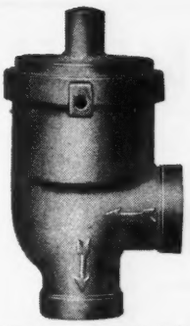
MONEL METAL POPPET CHECK VALVES

IDEAL for oil or air lines. Noiseless. End leakage troubles. Not affected by oil or acid impurities in oil. Sizes, 3/8" to 2". May be placed in any position. Write for bulletin No. 601.

No. 400

WHITE MACHINE WORKS
Order from Your Jobber FORT WAYNE 1, INDIANA

Since SIMPLEX 1910
SIMPLEX OIL HEATING CORPORATION
OIL BURNING SYSTEMS
REG. TRADE MARK
Simplex Oil Burning Systems

RESULTS COUNT!
SIMPLEX OIL HEATING CORP.
11 Park Pl., New York 7, N. Y.


Permits pumping of oil but closes to prevent syphoning in case of suction line break.
PREFERRED
Anti-Syphon Valves
APPROVED BY
UNDERWRITERS' LABORATORIES, INC.
For Oils Up To No. 5—Valves C5 and C10 are available in 3/8" and 1/2" sizes.
For Oils Up To and Including No. 5—Valves B5 and B10 are available in 3/4" and 1" sizes. (1" size is built up from 3/4" size with fittings.)
PR-173
PREFERRED UTILITIES MFG. CORP.
1860 BROADWAY, NEW YORK 23, N. Y.

let by John Lowry, Inc., builders, for New York University, University Heights Branch. The installation will feature a Crotty-Todd fully automatic oilburning system, supplied by unusually large oil tanks. Special equipment, such as windboxes, pump and heating sets, is being made in the Crotty plant.

Coastal Oil Employees Enjoy Annual Outing

THE ANNUAL OUTING of Coastal Oil Co., Newark, N. J., held June 22 at Blasberg's Grove, Hawthorne, N. J., was adjudged the best ever by the one hundred and fifty employees who attended. Despite intermittent rain an afternoon and evening program was held, consisting of games, races, contests, dinner and dancing. Prize winners included Mrs. Nelson Ott; the Misses Grace and Marie Coyle, Helen Lake, Ann Savarese; and Jack Falk, L. D. Lytle, Al Marchione, Kenneth Schiele, Ralph Tagliaferri, Jerry Tobia, Warren Whitley.

Arrangements for the outing were made by a committee headed by M. C. Healey, with the assistance of Michael

Pictured at outing are Nelson L. Ott, Coastal vice president and treasurer; George Fangmann, N. J. heating dealer; Mrs. Louis E. Marron, Wiley Butler, president and Louis E. Marron, chairman of board.

Archer, Jack Falk, Elmer Garrabrant, Karl Husselrath, L. D. Lytle, Robert Marron, Kay Roessler, Warren Whitley, Carmen Zarrella.

Sampsel Control Appoints Two Sales Representatives

TWO SALES REPRESENTATIVES have been named recently by Sampsel Time Control, Inc., Spring Valley, Ill., according to D. C. Wellcome, sales manager. Paul R. Jett, St. Louis and William B. Forrest, Detroit, are functioning in their respective territories.

Mr. Jett will handle representation for Sampsel Controls in southern Illinois, central and eastern Missouri, where he has been connected with the heating and control trade since 1938. Mr. Forrest, also identified with the heating industry since his release from the Army Air Force, will cover the state of Michigan.

Name Additional Wing Canadian Representatives

TWO ADDITIONAL sales representatives for L. J. Wing Mfg. Co., New York 11, N. Y., have been named in Canada. J. C. Davis Ltd., Winnipeg, will represent Wing heating, ventilating and combustion products in Manitoga, Saskatchewan and Alberta. Control Equipment Co., Toronto, will operate in Ontario.

Preston, Phipps, Montreal, continues representation in Quebec, with manufacturing operations conducted from Montreal.

the ONLY Ignition Transformer with a 2 YEAR Guarantee
Super
ELECTRIC PRODUCTS CORP.
1057 Summit Avenue, Jersey City 7, N. J.

FOR OVER A QUARTER CENTURY
Quality Products
COMPETITIVELY PRICED
SILENT KORTH OIL HEAT

A Complete Line .75 to 20 G.P.H.
Write for full information today.
ECKHART MANUFACTURING CO.
470 First Avenue West ROSELLE, NEW JERSEY

IRON-HIDE FUEL SAVING BAFFLES

INSULATING

COMBUSTION CHAMBERS

PRE-CAST

WRITE FOR LITERATURE AND THE NAME OF OUR NEAREST FACTORY REPRESENTATIVE

IRON-HIDE REFRACTORY PRODUCTS

DOCK ST. MATAWAN, N. J.

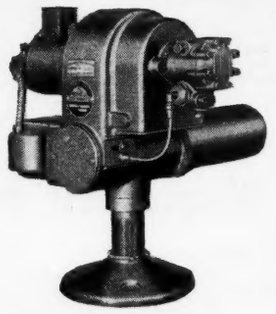
HOWELL

Controlled Flame

OIL BURNER

BURNS

Catalytic Fuel Oil



Howell DHP Oil Burners are constructed with standard parts for quick, easy service. By removing three screws the nozzle assembly can be completely removed. Flame adjustment is simple and accurate on Howell Burners. By loosening two screws and sliding the complete assembly back and forth, the desired size flame is obtained.

Write or wire for dealer information.

HOWELL ENGINEERING CORP.

DIXON, ILLINOIS

Oilheating Trends

(*Continued from page 11*)

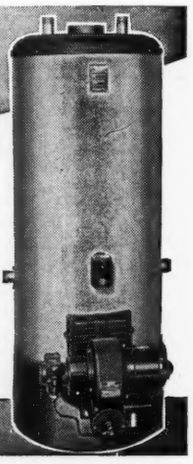
will move ahead very fast, but obviously so will oilheating.

Gas prices for heating are climbing in most markets, but not all. Of all dealers reporting, 64% say that gas costs are up in their markets since the end of the war; the other 36% report no such rise.

OIL SUPPLY ASSURANCE: In all the confusion over ample oil supply for next season, which fortunately is clearing, the $64 question as to a dealer's state of confidence is whether or not he is taking all of the orders he can get for new burners and assuring the customer that he will supply him the oil he needs. Among the reporting group, 70% are going ahead with full confidence; the other 30% are either not making any burner sales or are not assuring oil supply, which is about the same thing. This shows that the principal retarding factor to burner sales is public confidence, which will take a good while to fully restore.

DEALER COMMENTS: Typical dealers comments on the questions of the month were: "Cost of oil compared to gas in this locality is killing all sales" . . . "Two majors are not restricting dealers—others vary from the same as last year to 20% increase" . . . "While we are on oil allocation we are taking on good customers, getting rid of poor credit risks" . . . "We are not passing up any burner sales, but are not actively pushing them" . . . "Our supplier has allocated the same amount of oil as last year—consequently our new burner sales are limited to the amount of oil made available by lost accounts and savings achieved by replacements with more efficient equipment" . . . "We are selling all the burners we can until we reach 300" . . . "The only gas installations in our market are those in new homes approved a year ago" . . . "Gas rates here have lowered while oil prices went up; oil must come down to save the industry locally" . . . "Just recently the front page of a Boston paper emphasized that oil would be short for New England next winter; this one item offsets reams of good publicity, and is very discouraging" . . . "We are installing quite a few stokers, both domestic and commercial in buildings where the owners have given up on the oil situation" . . . "Greatest majority of new units are vaporizing pot-type in new homes, which we do not have" . . . "Manufacturers are trying to load us up with burners for a big Fall rush—I can't see it" . . . "With oilburner business very slow we cannot meet our overhead in the heating department" . . . "A domestic size combination gas-oilburner has appeared here with automatic changeover from gas to oil at an outside temperature of 10°" . . . "We do not expect additional gas competition until 1950, based on the opinions of the engineering department of our local utility" . . . "We could probably sell more oilburners if pipe was more available" . . . "Our major oil suppliers are noncommittal; the best independents offer slight increases" . . . "We are selling a few new oilburner installations and guaranteeing oil for the coming season, but it's a battle, brother" . . . "We need more advertising stressing oil availability" . . . "Our local gas company discontinued sales of burners to old homes, but monopolizes the new-home market."

Bock OIL BURNING WATER HEATERS



TWO BURNER TYPES — VAPORIZING WITH ELECTRIC IGNITION FOR THE SMALL JOB—PRESSURE ATOMIZING FOR THE LARGER. THE BEST IN OIL WATER HEATERS.

Bock CORPORATION

MADISON, WISCONSIN

Improve Your Service

Increase Your Sales

CLEAN SWEEP

SOOT REMOVER

THOROUGHLY CLEANS ALL TYPES OF BURNERS WHILE HOT

Approved by oil burner manufacturers and testing laboratories. Will not clog holes, leave a residue or overheat vital parts. Also effective in gas and coal units. Special Clean Sweep sprayer for faster, more economical service available. Ask your Jobber or write us today. (A few Jobber franchises still available.)

CLEAN SWEEP CO. P. O. BOX 156 SO. LANSING 9, MICH.

LOOK FOR THE BROOM ON THE PACKAGE